

# Designing for Humanity

A design thesis by  
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Department of Architecture and Landscape Architecture  
of North Dakota State University

By  
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for the Degree of  
Master of Architecture



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# Abstract

This thesis aims to explore the idea that a healthy prison design will in turn create a healthy atmosphere. I will work to design a prison that will aid in the inmates' transition back into society. By designing a structure that provides views to nature, access to natural sunlight, and room to move semi freely, I believe inmates will be healthier and happier.

Currently the United States has the highest rate of incarceration in the world and over half of the people incarcerated will end up back in prison within 5 years of their release. The oppressive nature of prisons create an unhealthy, aggressive attitude, which is reflected in riots, outbursts, and threats. The main goal of all prisons should be to help inmates re-enter society successfully. However, most prisons in the United States run on the idea of retributive justice instead of reformative justice. Retributive justice is defined by Wikipedia as "a theory of justice which holds that the best response to a crime is a suitable punishment, inflicted for its own sake. The only goal in retributive justice is punishment." This idea is extremely damaging, not only to the inmates themselves but to society as a whole. I cannot change the way inmates are being treated but I can change the way the architecture treats them.

# Theoretical Aspect Narrative

During the fall semester, I would like to study prisons designed with reformatory justice in mind along with how they affect the inmates and staff. I will do this by researching examples found in different countries. A great deal of the research I will be doing will be based in Norway because of their progressive attitude. They have shaped much of what other countries are now starting to implement. Norway has had great success in reformatory justice while the US still works mainly with retributive justice.

The Missouri River Correctional Center in Bismarck, ND has implemented a humanitarian system to help inmates live a successful life after prison. Because of this, I have decided to work with them to design a healthy living environment. I am proposing that the buildings on the site be torn down and rebuilt to code due to their deteriorating condition. After several floods that have compromised the integrity of many buildings, I no longer believe they are viable. The existing buildings were built decades ago and have become very outdated. They no longer meet the standards of quality that people deserve to live. Many might say that because they are inmates they do not deserve a high quality of life but we must remember that at some point these people will become our neighbors. If you treat someone like an animal it is only a matter of time before they start acting like one.

I would like to study how the built environment of a prison affects the psychology of inmates. I will do this by looking at case studies from different counties and comparing them to our own prisons. I believe that a holistic approach to this design typology will greatly affect the detainees. Studies have shown that people who are exposed to the natural environment are happier and more productive. I would like to test this theory in a prison environment by creating an environment that is open, visually stimulating, and comforting. Prisons in the United States are known for being harsh, oppressive places; I would like to change this stigma to mirror what is happening in Norway.

# Leoben Prison

Location: Gaz, Austria  
Architect: Josef Hohensinn  
Designed: 2004

People have described this prison as looking like a modern library or office building based on its inviting materiality and design. By looking at the exterior of this structure, most would not guess that it is a prison containing over 200 inmates, some with felonies. The design by Josef Hohensinn aims to give inmates maximum security on the outside while allowing maximum freedom on the inside. This is done by including a lot of natural light, balconies off inmate's rooms, and the freedom to move within its walls. The architect is now known worldwide for his design of Leoben Prison. He stated in an article by The New York Times that "One always has mixed feelings about having one work singled out for attention." Some individuals might view this modern interpretation of a classic prison as a bad thing but I believe it is the future of our correctional system.

People often look at this facility and believe it would cost a small fortune but the article "Behind Bars...Sort of" states that it might cost a little more than other prisons but not much. "as a rule, the more a corrections center bristles with overt security, with cameras, and squads of guards, and isolation cells, the more expensive it's going to be." If it doesn't cost more to design a facility like this, why are we still designing oppressive facilities? We need more architects like Josef Hohensinn who stated, "The prisoners' dignity is all I really care about". After years of sentencing individuals to severely bleak prisons with negative results why turn down an idea that has had such positive results? Former commissioner of the NYC DOC, Michael Jacobson declared "it's absurd to think that the worse you make these places, the less recidivism you'll have". Leoben is a step in the right direction but we cannot stop here.

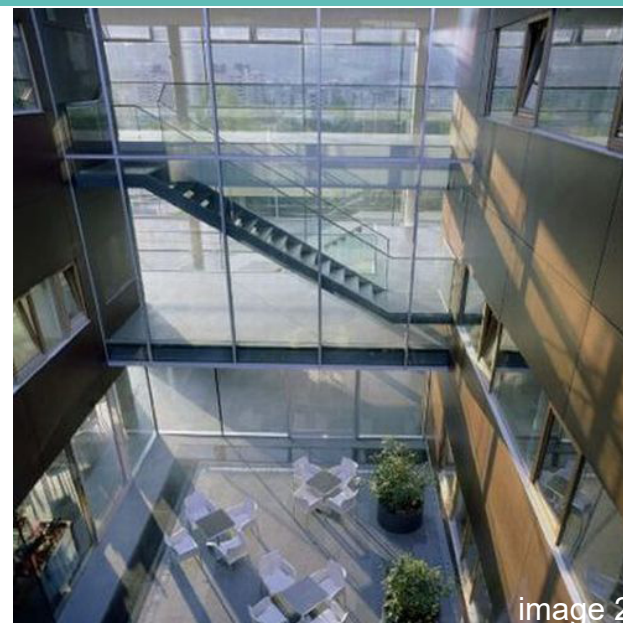


image 2



image 3



# Leoben Prison



image 4



image 5



image 6

This facility has the same typology as my project and has implemented some of the things that have proven to create a healthy environment for inmates. It is about the same size as the facility I will be designing, however, while this facility is contained within a single building, I hope to design a campus setting which will allow inmates a sense of normalcy. This decision was made to ensure that detainees are living a life that mirrors what they will experience when they are released. The campus style design will also allow detainees to get outside at least two times every day. Spending time outside and having plenty of access to natural sunlight has become increasingly important in Northern climates where the rates of Seasonal Affective Disorder have risen in recent years. This can be a huge issue in prisons where inmates are not allowed enough time out of their cells.

The location and city size of Leoben are not like my project at all. It creates a great contrast between the two situations proving this kind of facility can work well in different cultures. Leoben penitentiary is located outside the city of Leoben, Austria which has a population of about 25,000. I will be redesigning a facility in Bismarck, North Dakota which has a population of about 75,000. The city size is not the only difference we see between these two facilities. The United States holds an incarceration rate that is five times as high as in the United Kingdom. With that statistic, one must wonder why we aren't enforcing some of the ideas they have successfully put into place.

# Mas d'Enric Penitentiary



image 7

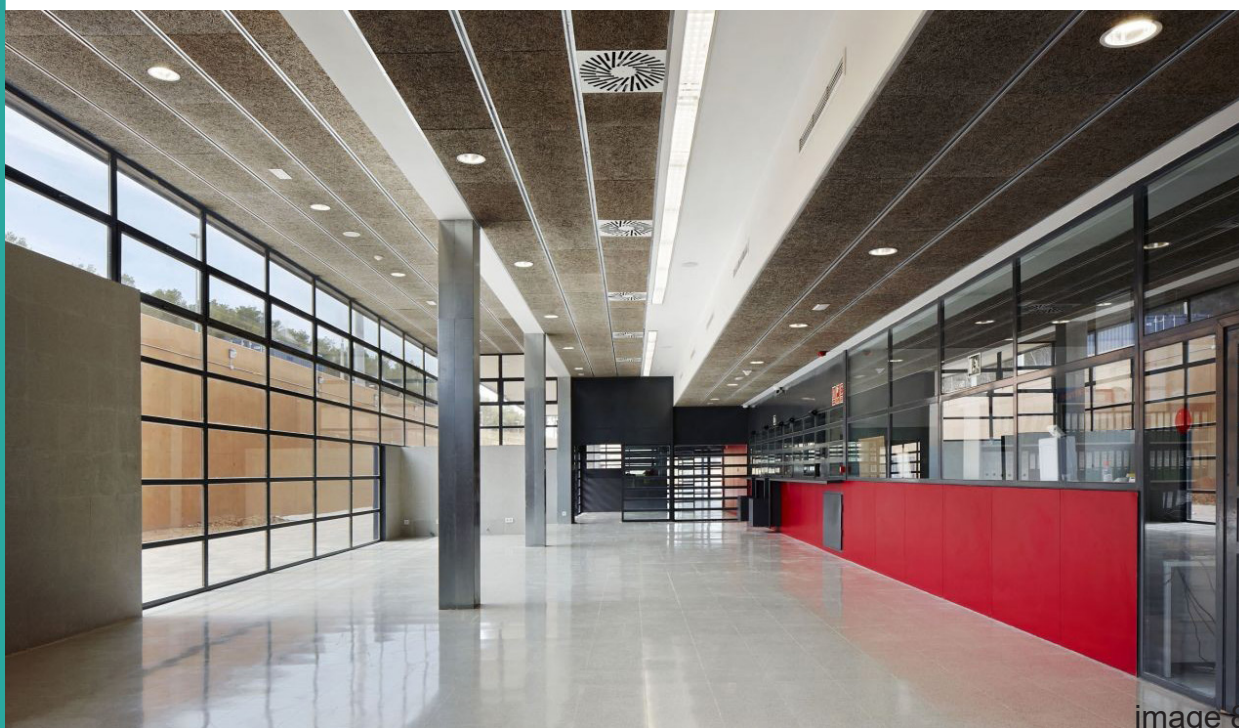


image 8

Location: Tarragona, Spain  
 Architect: AiB Estudi d' Arquitects  
 Designed: 2013

This prison uses unique design aspects to solve the issue of how to allow inmates free space while keeping them secure. In recent decades, there have been more examples of evidence based prison design popping up around the world. This example is located in Tarragona, Spain. It is designed in a way that responds to the need for discipline while allowing freedom and liberty. Prisons are very much a sociocultural thing but are so far removed from the public eye that people often forget they have a voice in the way things are done. The architect of this penitentiary states that, "The invisibility of the penitentiary as an institution demonstrates an unresolved contradiction underlying contemporary society". It takes people like these architects to challenge the current standing of our correctional system and demand a change.

When you think of a classic prison, I'm sure you picture dank cells with little to no sunlight and tall, intimidating fences on the outside. This penitentiary erases that idea from reality and replaces it with a facility abundant with sunlight and no exterior fences. The buildings are laid out in a way that doesn't require any fences and allows views of the exterior world.





image 9



image 10



image 11

This penitentiary is much larger than the one I will be designing but it was designed with the same standards of quality I plan on proceeding with. The architects clearly care a lot about the inmates who will be incarcerated here. They refer to them in very real terms, wanting to celebrate openness in the face of detention. This idea is not realized worldwide but should be recognized for how life changing it is.

The site is in Spain which is very different from the location of Missouri River Correctional Center. Spain and North Dakota are about as different as they come when it comes to climate. The outdoor space at Mas d'Enric will likely be used year round while the yard at MRCC does not see a lot of action between the months of November to February. Mas d'Enric utilized the change in topography to form the roof line of the facility which made it extremely dynamic and appealing to the eye. The topography changes in North Dakota are not great enough to effect the roofline but we can create dynamic structures in different ways.

The facility is huge; it contains multiple basketball courts, a soccer field, and plenty of other outdoor space in the form of courtyards for the inmates to utilize during their free time. The cells border the basketball courts to provide each person access to recreation areas. Although it is much bigger than the MRCC campus, it uses some of the same materials that I would like to apply in my design. The workshop consists of corrugated metal walls with large timber beams that allow for long spanning members. The open space is advantageous for a workshop that uses large machinery.



# Las Colinas Detention and Reentry Facility



image 12

Location: San Diego, California  
Architect: HMC and KMD  
Opened: 2014

The architects of Las Colinas took inspiration from the architects of Leoben and Bastoy to design this facility. According to an article published by Fast Company, at the time of its design, there were no other facilities in the United States that use “environmental and behavioral psychology to improve the experience and behavior of both inmates and staff.” Although this facility was designed to house female inmates, I have been greatly inspired by the careful design tactics they implemented. The idea of creating a correctional facility much like a college campus is a great idea. It gives inmates more freedom to move through the space in a way that is comfortable for them.

Currently our correctional system is designed in a way that everyone is treated poorly until they prove they deserve better treatment. With that better treatment, they are rewarded with more freedom within the confines of the facility. This facility mirrors that idea by allowing inmates with good behavior access to amenities and better accommodations.



# Las Colinas Detention and Reentry Facility

This facility was designed for female inmates but matches the program for my project. The ideas that the architects implemented here have been very informative. There is so much more we can do with the design of correctional centers. The concept to focus on the health and well-being of detainees was a great idea. Safety and security can still be accomplished within a healing setting. After only a few years of being open, there was already a decrease in the amount of inmate violence. This is proof that these ideas are working and can work in other situations.

The site location for this project is vastly different from North Dakota. Bismarck has a much smaller population, the climate is very different, and the topography of the state is dissimilar. However, none of these factors mean that this kind of system cannot work in Bismarck or even other states. Both facilities aim to help transition their inmates back into the world outside prison. This goal is truly the only thing that matters when comparing the two facilities.



image 13



image 14



image 15



image 16



# Bastoy



image 17



image 18

Location: Bastoy Island, Norway  
Architect: Unknown  
Opened: 1982

Both Bastoy and Halden prisons in Norway are very well known around the world. They have become known as the most humane prisons in the world. While Halden is a maximum-security prison, Bastoy works as a transition facility between prison and the outside world. Inmates are able to apply for transfer there within the last 5 years of their sentence. This concept is comparable to the process for being transferred to “The Farm”. Inmates in North Dakota are able to transfer there within the last 3 years of their sentence if they have displayed good behavior.

Detainees at Bastoy live in units with a few other men where they are responsible for cooking one meal a day. They buy food and supplies with money they earn from their jobs on the island. Everyone works which helps the island run successfully as well as preparing inmates for their future. Some people criticize Norway for being too “cushy” but no other country can boast the low recidivism rate that Norway can. Along with working, inmates are given free time to work on hobbies such as fishing or swimming in the summer.



# Bastoy

The climate of Norway is more similar to North Dakota than previous settings. They both have cold winters and deal with limited sunlight in the winter months. Some might think that because of the frigid winters inmates wouldn't be allowed outside but they still go about their normal routines. Keeping them inside during the winter would be like sending them back to a classic prison with no freedom and no responsibility.

The campus atmosphere is similar to Las Colinas, which I would like to use in my design. I feel that it gives inmates a sense of freedom that a typical prison design lacks. It forces the inmates to interact with the world outside which is a key component in their transition.

This facility is probably the most closely linked to MRCC based on the policies that are in use. Although the policy change at MRCC came after a visit to Halden, another facility in Norway, both Halden and Bastoy implement similar policies when dealing with inmates. Where most facilities in the US restrict guard-inmate relationships, Halden, Bastoy, and now Missouri River Correctional Center encourage them. It has proved to reduce the amount of violence between the two groups.



image 19



image 20

*“The degree of  
civilization in a  
society can be judged  
by entering its prisons”*

*-Fyodor Dostoevsky*

### Building Typology:

Low Security Correctional Center

### Client Description:

The focus of this thesis is to design a healthy prison for the inmates and guards who inhabit the space. Although guards are able to leave when they have completed their shift, the environment still effects their mental health. Spending long hours in an oppressive space is not healthy for anyone. This is why I believe designing desirable spaces for the correctional center will be advantageous for all.

As much as we do not want to admit it, the justice system affects us all. With how many people are incarcerated in the United States, it is highly unlikely that you don't know someone who has been, or is still incarcerated. Because of how many people are locked up in the US, this issue effects everyone.

### Site:

The site for this correctional facility is in Bismarck, ND. There is currently a correctional facility there that functions but has been deteriorating for years. The Missouri River Correctional Center sits along the Missouri River and serves the surrounding areas. Several of the buildings on site have flooded over the years and now stand vacant because damage is too severe.



# Major Project Elements

## Administrative Spaces

### Staff Meeting Rooms

Meeting rooms will be used by the staff only. The purpose of these is for guards to discuss what is happening in the prison.

### Staff Offices

Members of staff need offices for paperwork and other administrative duties.

## Interaction Points

### Classrooms

There will be dedicated flexible spaces so inmates can learn in order to get their GED, as well as prepare for the work release programs.

### Holding cells

When people come into the correctional facility they have to be processed before they can be placed in their room. The holding cells will work as transition spaces between the outside and inside world.

### Infirmery and Exam Rooms

With an aging population in the correctional system, infirmaries are a very important part of prison design. Exam rooms will be provided for private consultations with medical staff.

### Nondenominational Reflection Space

Religion and meditation often becomes a very important part of inmates lives when they are trying to make amends with their crimes. This space will allow quiet reflection for any inmate who needs time to think and reflect.

## Inmate Spaces

### Private Dorm Rooms

People who have shown good behavior will be able to move into private rooms. This will help aid in their transition back into society.

### Multi Bed Dorm Rooms

The majority of inmates will sleep in dorm style spaces with half walls to allow clear views. Every person will be responsible for keeping their own space clean.

### Bathrooms

Bathrooms will be private for the inmates but will have access for the guards for the purpose of safety and security. Although this is a low security facility, their still has to be safety measures taken.

### Kitchen

The kitchen will be run by inmates overseen by guards.

### Dining Hall

While incarcerated, inmates will be provided with three meals a day which they will eat in the dining hall.

### The Yard

The yard is where all inmates will spend their time outside.

### Recreation Area

This space will be specified for inmates to exercise indoors. Running and lifting weights can be a healthy and positive way to exercise which lowers the chance of depression.

# Site Information

## NORTH DAKOTA

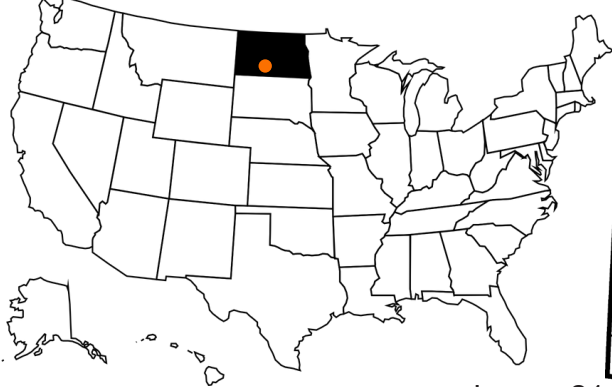


image 21

## BURLEIGH COUNTY

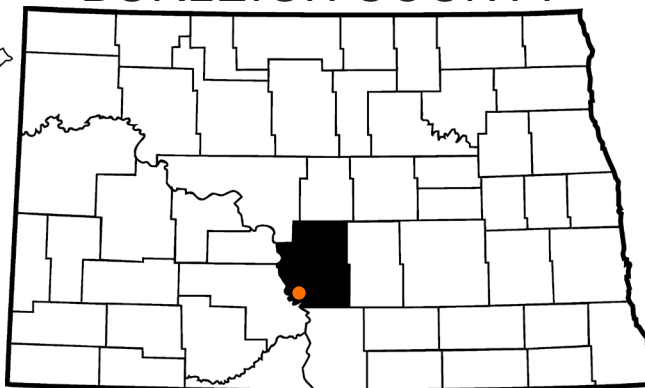


image 22

## BISMARCK

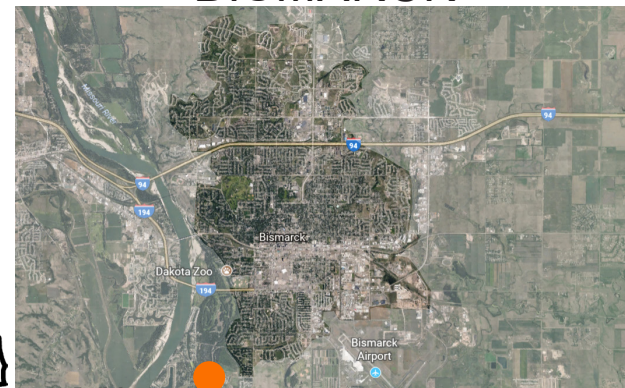


image 23

The site for Missouri River Correctional Center is located in the American Midwest. North Dakota is home to the Great Plains, known for beautiful rolling hills and prairies. The population of North Dakota is 757,952 as of 2016, of that 72,417 reside in Bismarck. With views of the Missouri River, MRCC has a beautiful site with a lot of potential. With a new design, this site can become a beautiful healing space that aids in the transition inmates experience while leaving the system.

Burleigh county is not only home to Missouri River Correctional Center but also North Dakota State Penitentiary and borders Morton County which is host to the youth correctional center. There are 1,840 inmates in the correctional system in North Dakota, about 1,000 less than their neighbor to the west, Montana. With the changes director Leann Bertsch has put into place, we hope to see a decline in the prison population in coming years. I hope to aid in this process through my design.

MRCC sits on the outskirts of Bismarck along the Missouri River. The site is about 900 acres and consists of grazing land for sheep, rented farm land, and a grouping of buildings. Although the site is not considered to be within the flood plain, it has flooded several times since its opening in 1992. Because of the flood damage, there are several buildings on site that remain unused. The vacant buildings are not the only issue at MRCC. The facility is very outdated and in need of change.



# Site Information

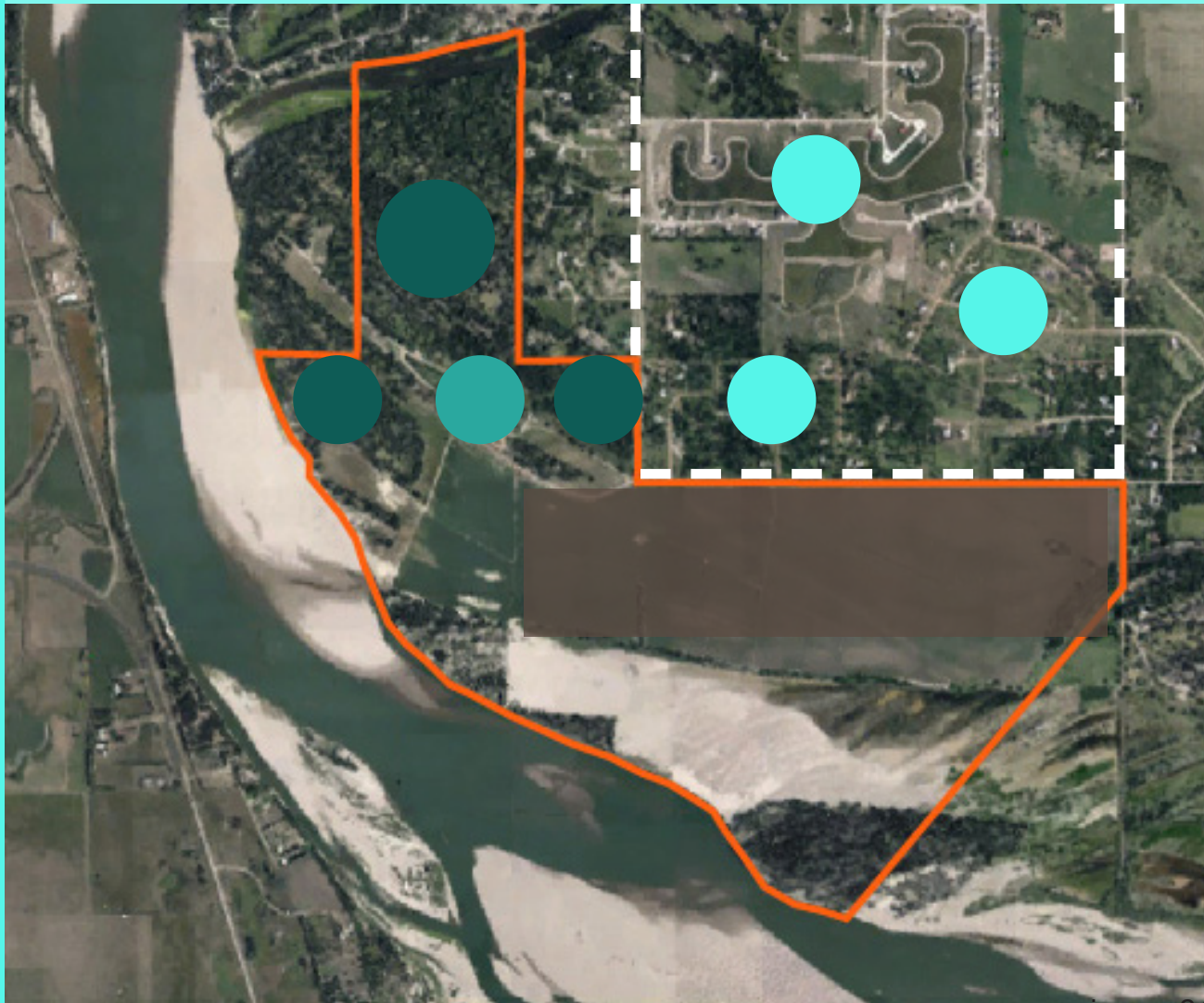


Image 24

The complex at MRCC includes several things that most American prisons don't, including irrigated land that is leased to a local farmer, grazing areas for sheep that inmates care for, and no walls or fences surrounding the facility. Some might think that inmates would try to escape frequently but in the four years that Deputy Warden Joey Joyce has been there only five inmates have walked away. The grounds represent the way MRCC runs, by allowing inmates the freedom to choose their own path when it comes to their future. In most cases these men choose to make a change in their lives for the better.

Missouri River Correctional  
Center Site

Irrigated Land

--- Roads Near Site



Group of Buildings

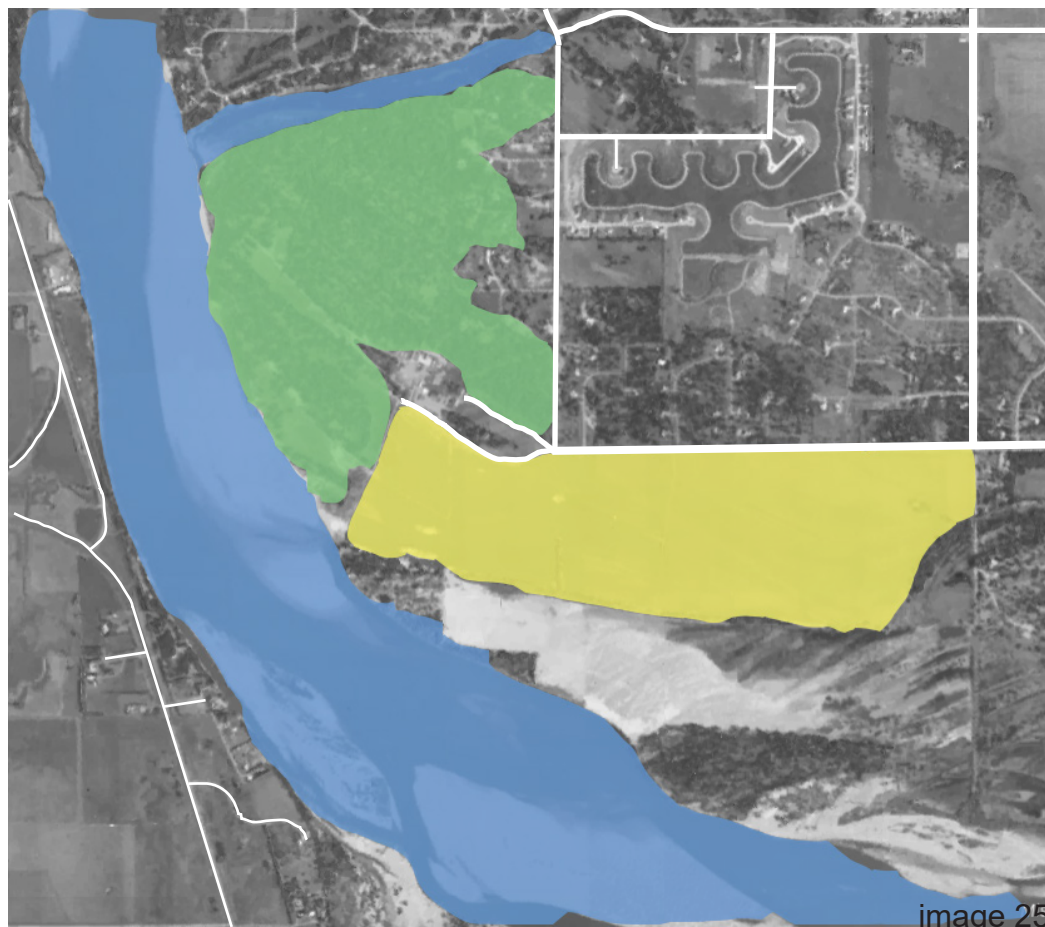


Sheep Grazing



Residential Areas

# Site Information



The Missouri River runs along the length of the site on the Western side. Because of the flat landscape in that area, floods happen every few years and effect the surrounding areas. After years of deliberation, a levee was passed and construction has started. This addition will help everyone who lives on and around the site of Missouri River Correctional Center. Past floods have caused a great deal of damage to buildings on the site. The land has eroded in areas which has caused changes in the landscape.

There are huge old cotton wood trees on the site that create a beautiful, serene atmosphere. The forest helps filter air and slow wind speeds so the area is comfortable year-round. Some of the trees have died due to the severe flooding and were cleared away to make room for new growth.

The large size of the site allows for more than just the immediate buildings to flourish here. A local farmer rents a portion of the land to grow crops.

Vegetation On Site

Farm On Site

Water On Site



# Site Information

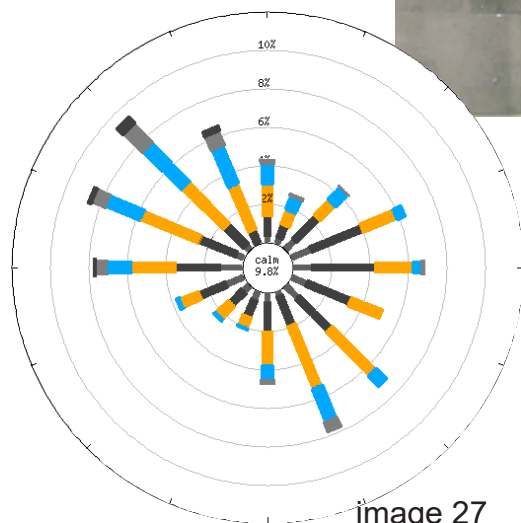


image 27

Average Yearly Wind Direction

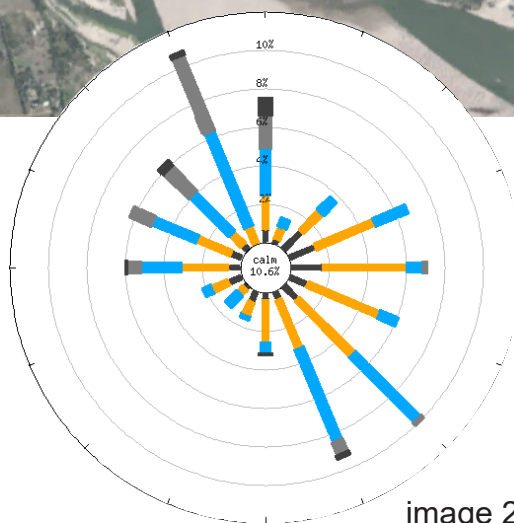


image 28

December Wind Direction

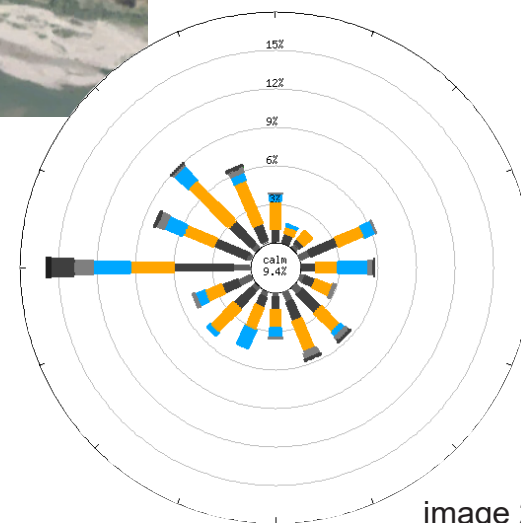


image 29

June Wind Direction



# Site Information





# Site Information



image 31

The grounds of Missouri River Correctional Center are expansive. There is a total of 900 acres, however, inmates are only allowed to use the area immediately surrounding the buildings. They are able to move freely through the specified area during the day but are required to remain inside at night. There are no fences around the grounds, instead signs tell visitors where they can and cannot go.

1. The roads on site are used for vehicle and pedestrian traffic. Inmates are allowed to walk in their free time. They are also given space to practice religious ceremonies on the grounds.

2. This photo shows the outdoor recreation area. There is basketball, volleyball, baseball, and more. There is also an indoor gym with weights and treadmills. Inmates are encouraged to exercise daily.

image 32 image 33



1



2



# Site Topography



image 34

This map shows the topography of the area immediately surrounding the buildings of Missouri River Correctional Center. The site is relatively flat, much like the majority of North Dakota. Because of its flat topography, it is hard to protect the buildings from flooding. Several of the buildings have been damaged beyond repair.



# Building Information



Due to floods on the site, many of the buildings were falling apart which deemed them unsafe for use. A few of the vacant buildings have been torn down while others got put to use. One of the previously vacant buildings was turned into housing for dogs which are trained by inmates.

Tearing down old buildings leaves less storage space and causes things to be shuffled from one place to another, never finding a permanent home. It is not a great solution to the problem but they cannot afford to construct new buildings.





# Building Information



**A. Inmate Dorm**  
image 37



**B. Cafeteria**  
image 38



**C. Inmate Bathroom**  
image 39



**D. Food Storage**  
image 40



# Building Information



**E. Exam Room**  
image 41



**G Kitchen**  
image 43



**I. Class Storage**  
image 45



**K. Vocational Training**  
image 47



**M. Single Housing**  
image 49



**F. Medical Office**  
image 42



**H. Food Storage**  
image 44



**J. Computer Lab**  
image 46



**L. Library**  
image 48



**N. Single Dorm**  
image 50



# Building Information



image 51

Inmates who demonstrate good behavior are rewarded with their own room along with a nicer day room. Many prisons still use the retributive justice model that punishes individuals for bad behavior. MRCC has worked to encourage good behavior by awarding it with more freedom and better room conditions. Their good behavior helps them move toward a lifestyle similar to what they will experience when they are released.

# Building Information



image 52

In order for inmates to advance their education and work toward a GED, classes are taught at different levels. Students who need more help are given the time they need with teachers. Obtaining a GED while incarcerated will give inmates a better chance at a normal future when they are released and also raises their self-confidence. MRCC holds a graduation ceremony for students who receive their GED. Family is allowed and encouraged to come celebrate the occasion.

# Project Emphasis

The redesign of Missouri River Correctional Center will emphasize the importance of healthy, holistic design. Currently prisons are designed to oppress the inmates that reside within them. I aim to turn this idea on its head and design a space that can influence their behavior while incarcerated as well as their outcome when they are released. The Bureau of Statistics stated that in 2005, the rate of recidivism in the US was 60%. These individuals do not learn the skills necessary to live outside of prison. I believe this is something that could be fixed with the help of thoughtful architecture.



# Project Goals

## Shed light on some of the major issues our correctional system has

The United States has the highest rate of incarceration as well as the highest rate of recidivation. If we could change the way our prisons treat inmates, we could change the future of corrections. It is by no means an easy task, it is however, a necessary one.

## Study how the architecture of modern prisons effect inmates

Many inmates survive in prison for years at a time. It becomes their lifestyle and sometimes the only thing they know. According to the Bureau of Justice Statistics, at least 95% of inmates will be released at some point. This means that these people will become our neighbors and either learn to acclimate or end up back in prison. Wouldn't it be better if the environment of prisons supported a healthy transition back into society?

## Propose a solution

I propose that a thoughtful design will change the outcome of many issues we currently face. With the research I conduct and the questions I ask, I hope to see someone make this a reality. It would take years to test the outcome of this project but I believe that if someone tried it that it would be successful.

# Project Goals

Through this project I hope to learn more about who I am as a designer. I believe this project is so important because it could really make a difference. This kind of design is bigger than a single human being, it could affect the lives of thousands of people for years to come. I hope that through this process I learn more about what it takes to be a serious designer in today's world and what role an architect plays in changing the future of our society. I believe that architects are given a platform to make a difference and we should use that to inspire our designs.

By the end of this project I hope to know more about correctional design and everything that is considered when designing a prison. This will be the most challenging project of my education but I believe that I am capable of succeeding based on my prior knowledge and work ethic. Not only will this be the most challenging project, it will also be the last project of my education.

With the completion of this project I will graduate with my Master's degree in Architecture. I hope to begin my professional career with a firm that believes in the same things I do. I would love the opportunity to work on a real prison with a team of architects that also want to make a difference.

# Plans to Proceed

The final documentation for this project will be compiled in a single book that shows my design process as well as the final design. As a part of the design process, my research and exploration will be explained. My research includes interviews with architects and corrections officers. I have also compiled articles explaining evidence based design in projects from around the world. The information found in those articles has influenced my design process by informing me on what types of spaces need to be included in a humanitarian prison. The conclusion of this project will include a digital presentation narrated by myself, the designer and primary researcher. The digital book I complete will be submitted to North Dakota State University Institutional Repository to be accessed by future students.



# Research Direction

The direction of this project came first from the set of required deadlines along with my typology choice. It took a specific path when researching and designing because of the standard requirements that needed to be done. It was important to pick a site early on so I could plan a time to visit and evaluate the area. The site influences some of the major project elements when designing. After choosing what location I would be studying, I was able to direct my research in a way that would benefit my design. Looking at case studies of existing projects helped a great deal when deciding what spaces need to be included in my design. After picking my site and narrowing down my case studies I looked toward the future and decided on a schedule. After visiting my site, I will analyze the best configuration of buildings and explore numerous design options. The configuration of buildings aims to allow inmates as much freedom and normalcy during the remainder of their sentence.

The inspiration for this project came while driving past the prison in St. Cloud, MN. The hundred-year-old prison is more beautiful than most of the facilities we design today. It seems as though somewhere in our history people stopped caring about the architecture and started focusing on the harshness of the facility. A correctional center can be secure while also being beautiful and engaging. I challenged myself to design a facility that changes the way the public views corrections.

After doing a bit of research I came across Norwegian prisons. I have since learned that a lot of people in corrections are aware of the differences between the US and Norway. Norway has adopted a humanitarian way of dealing with inmates. They have had great results in their facilities, Bastoy and Halden. While Norwegians have advanced their ideas toward corrections, the US is still working largely in retributive justice. I believe the facilities in Norway are moving in the right direction and we should follow.

For my thesis, I plan to design a facility that mirrors what Norway has accomplished. The reason for this is to change the future of correctional design. We have the ability to change the way the architecture of correctional facilities treats the inmates that reside there. The site for my design is located in Bismarck, North Dakota. The facility on site has gone through recent policy changes to follow the "Norwegian Standard". Because of the changes that are already underway, I believe the type of facility I want to design will be very successful there.

# Documentation of Design Process

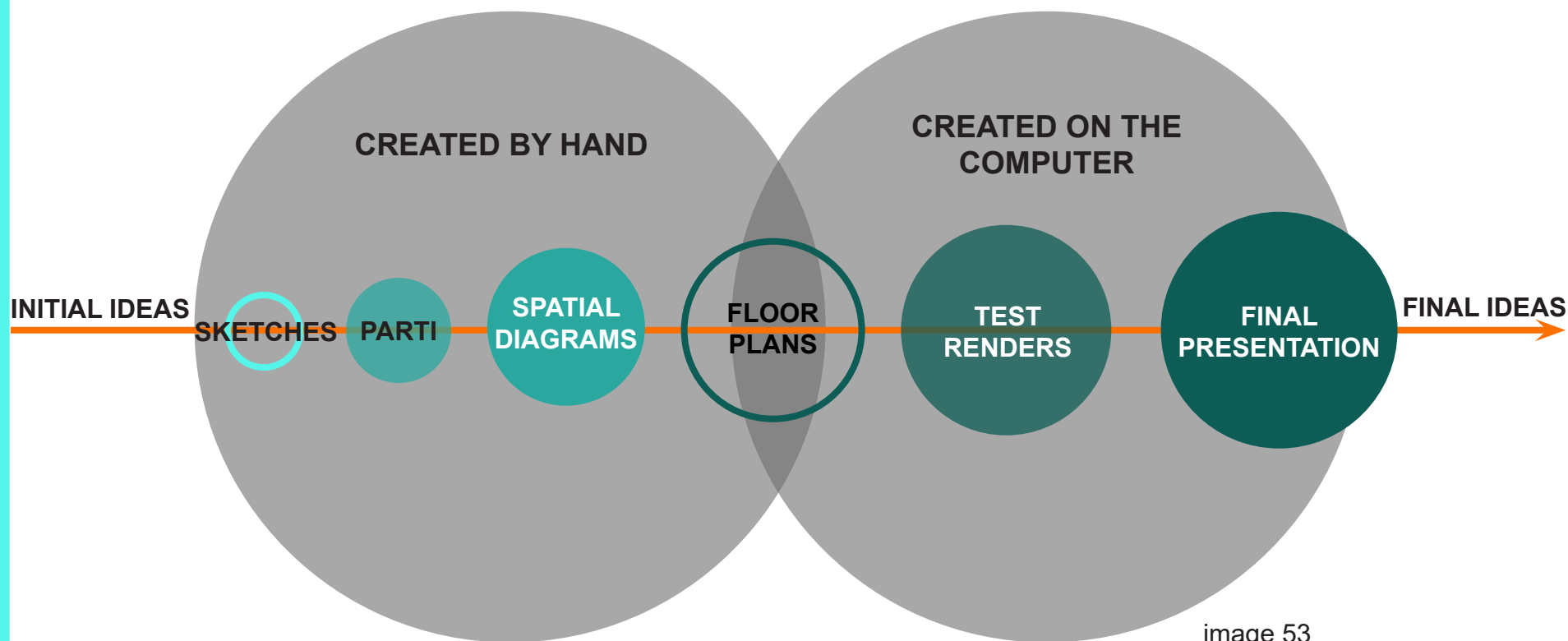


image 53

The documentation process for the design portion of my project will start with me drawing by hand before moving into computer based programs. I will use a combination of software to complete my design along with my final presentation. All final designs will be saved in chronological order in PDF format. The final presentation will be physically displayed and verbally presented. After the project is completed it will be available for the public to view online through the North Dakota State University Repository and through my personal website.



# Schedule

## September

- 5. Start Initial Research
- 7. Thesis Proposal  
-Draft
- 15. Institutional Review Board

## December

- 14. Thesis Program  
-Final

## March

- 12. Thesis Program  
-Final
- 23. Structure
- 28. Start Renders

## October

- 12. Thesis Proposal  
-Final
- 13. IRB Meeting
- 23. Visit Site
- 26. Thesis Program  
-Draft

## January

- 8. Start Schematic Design
- 12. Thesis Program  
-Final
- 22. Computer Massing

## April

- 16. Complete Boards
- 20. Digital Copy due  
-Draft
- 23. Physical Exhibit due
- 30. Thesis Review Starts

## November

- 22. Interview architects  
-BWBR

## February

- 5. Basic Floor Plans
- 12. Thesis Program  
-Final
- 26. Final Floor Plans

## May

- 3. Thesis Review ends
- 7. Digital Thesis Book due  
-Final
- 11. Thesis Document due  
-Final

# Results from Theoretical Premise

I stated my theoretical premise to be the research of healthy prison design on a global scale. I aimed to study how the oppressive nature of prisons affects the inmates and staff. With the results from my research I would then decide the best way to redesign an existing facility. I did this by comparing examples from around the world and evaluating results from each of them. The existing facility I chose to redesign is Missouri River Correctional Center. The correctional center is located in Bismarck, ND. I decided on this facility after some research into its current standing. I came across this site through my research for healthy prison design because of their recent policy changes. The decision to redesign this correctional center has shaped my research and overall project.

After researching several examples of prisons from around the world I came to the conclusion that healthy, holistic design is always a better solution. There are several examples of facilities that have undergone the transition from retributive justice to reformative justice with positive results. All the facilities I researched were low or medium security apart from Halden prison in Norway. Halden functions as a high security prison with some of the best results as far as recidivism rates and the lack of violence. I looked closely at examples from Spain, Norway, Austria, and the United States. All of these examples come from vastly different places both geographically and sociologically. In all my reading, I didn't come across any proof that improving the lives of inmates would end badly. For the most part, the prisons deal with transforming to reformative justice in much of the same way. Although they all have similar qualities, the designs are very different. The biggest thing I noticed across the board is the relative freedom these new designs allow the inmates. In most cases, they found that allowing inmates more freedom and responsibility proved to be a good thing. Instead of taking advantage of the system, they respected it more. This idea is taken to the limit with a few aspects within both Missouri River Correctional Center and Halden. MRCC pushes the boundaries concerning freedom with allowing inmates to move freely through the grounds. There are no walls or fences around the facility, only signs warning inmates that certain places are off limits. This idea works so well that in the four years the current warden has been in charge, only 5 inmates have walked off property. Halden also tests the limits of trust by giving inmates access to kitchen utensils including knives and other items often used as weapons in other prisons.



# Results from Theoretical Premise

As with anything else in our society, these types of prisons generate vast opinions from the public. Some individuals still believe that retributive justice is the only way to go, while a surprising amount of people see the value in reformative justice. Looking at the low rates of recidivism within Norwegian communities compared to the rates in the United States should be enough proof that our system does not work. A large factor that has to be considered is where people live, some areas of the world view crime and punishment differently than the rest. Although I believe this kind of facility could work anywhere, some communities might not accept it. Sociological factors are not the only thing that needs to be considered when discussing the transition from retributive justice to restorative justice.

One of the major advantages to restorative justice is the healing process. Retributive justice does not offer any reformation or rehabilitation for inmates. In order for an inmate to successfully transition back into society there has to be something more done than just locking them in a cell and hoping they will change. The psychological damage that is caused by inmates spending long periods of time in solitary confinement cannot be undone. Psychiatrist, Terry Kupers claims there are a lot of negative effects the Security Housing Unit, or SHU, has on people including massive anxiety, paranoia, depression, concentration and memory problems, and loss of ability to control anger. These issues in turn get people in more trouble which leads to increased amounts of time in SHU. It is a vicious cycle that ends up destroying people's humanity.

# Research

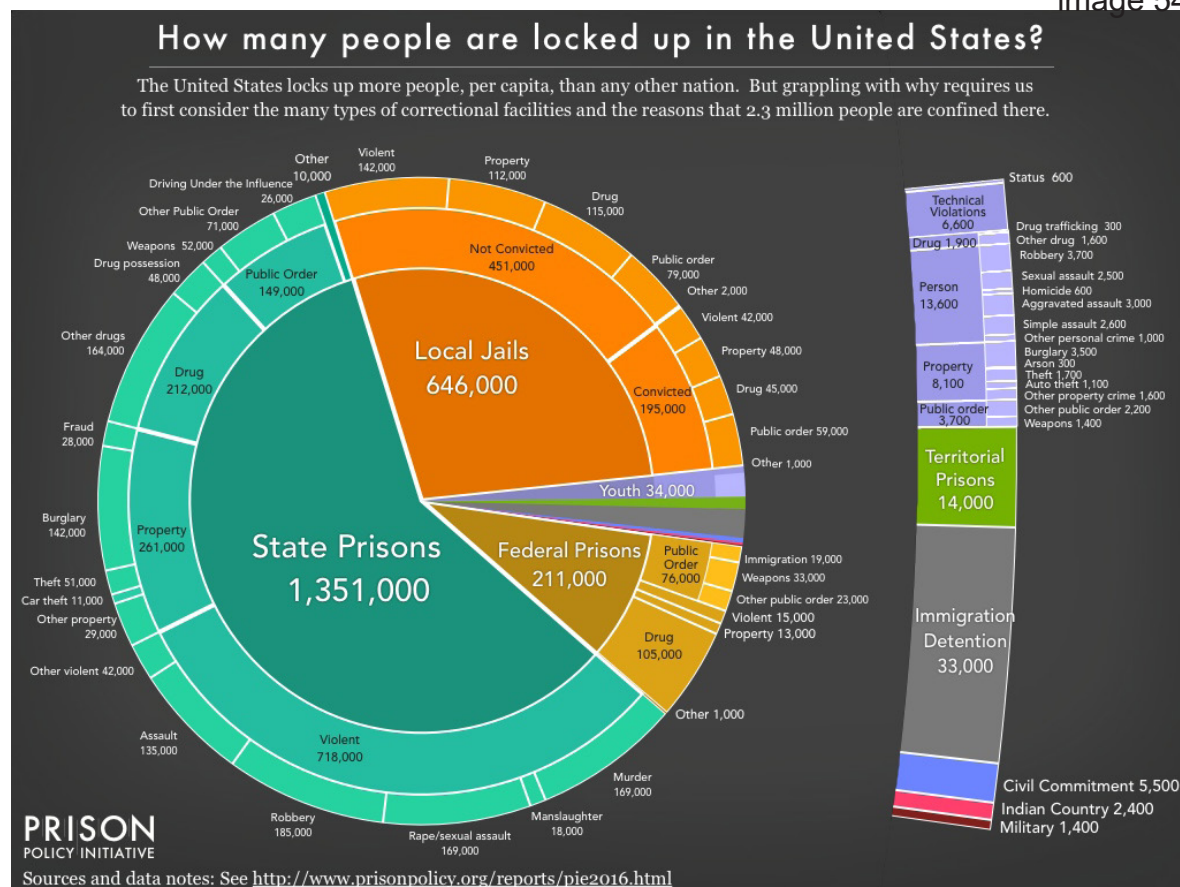
## Introduction

The purpose of this research is to look at the architectural characteristics of successful correctional centers and deduce what specific aspects make them so successful. America is known world-wide for its correctional system and the harsh punishments assigned to those who come in contact with it. Many citizens of the United States believe that harsh punishment is a good thing, they believe that with harsher punishment comes reform. Select individuals believe the opposite is true; they believe that harsh punishment harms individuals and in turn increases the percent of recidivism. Research done by the National Institute of Justice supports this belief and shows that long prison sentences do very little to prevent future crime. (Nagin, 2013)

The intent of the American correctional system is to deal with everything “involving the punishment, treatment, and supervision of persons who have been convicted of crimes. These functions commonly include imprisonment, parole and probation. A typical correctional institution is a prison” (Stohr, 2008). Within the American penal system there are separate branches including The Federal Bureau of Prisons and the Department of Corrections. Every state has a Department of Corrections that oversees the incarceration and release of individuals on a state level. Prisons of all security levels in America are repeatedly filled to capacity with no signs of change in the future. (Warmesley, 2005)

Under the umbrella of corrections are several types of facilities ranging from county jails, state prisons, all the way to maximum security penitentiaries. Each facility has a different purpose and with that, a different level of security. Correctional centers are typically low security buildings that house individuals who have proved they have the right to be there. Often these people are moved from state penitentiaries to correctional centers when they have a small remainder of time left in their sentence or are placed there immediately after the verdict to serve a shorter sentence. The goal of most correctional centers is to prepare inmates for life outside of prison. While this goal is valuable, some facilities have little success. There is room for improvement in many facets.

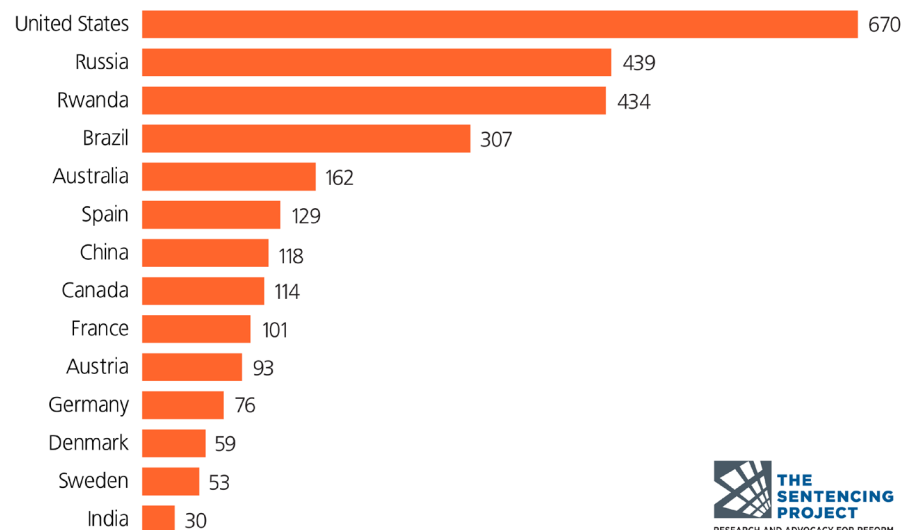
image 54





Currently, America has the second highest prison population rate in the world at 666 per 100,000 of the national population, beat only by the Republic of Seychelles, a chain of islands located in the Indian Ocean off the coast of Africa. As of 2014, the prison population of Seychelles is 738 per 100,000. (World Prison Brief). This statistic leads people to believe that the US has decreased its population within the prison system which is not true. In fact, the United States is still the leader in by a long shot at 2,145,100 with the runner up being China at 1,649,804 regarding the prison population total. Not only is America the top for incarceration rates, we also have one of the highest rates of recidivism. In 2005, the five-year recidivism rate in America was 76.6%, this means that almost 80% of people who are released from prison will end up reincarcerated within 5 years of their release. This fact is even more staggering when considering the fact that “at least 95% of all state prisoners will be released from prison at some point” (Hughes and Wilson, 2017). Although there is not much information reported from other countries about their yearly recidivism rates, we know that the rate of recidivism in Norway has dropped below 20% within the past decade. This is due in part to the laws that have been implemented nationwide, which reflect their outlook on how prisons should be run. While judges in America are sure to sentence longer and harsher punishments, Norway is busy working to rehabilitate and release inmates.

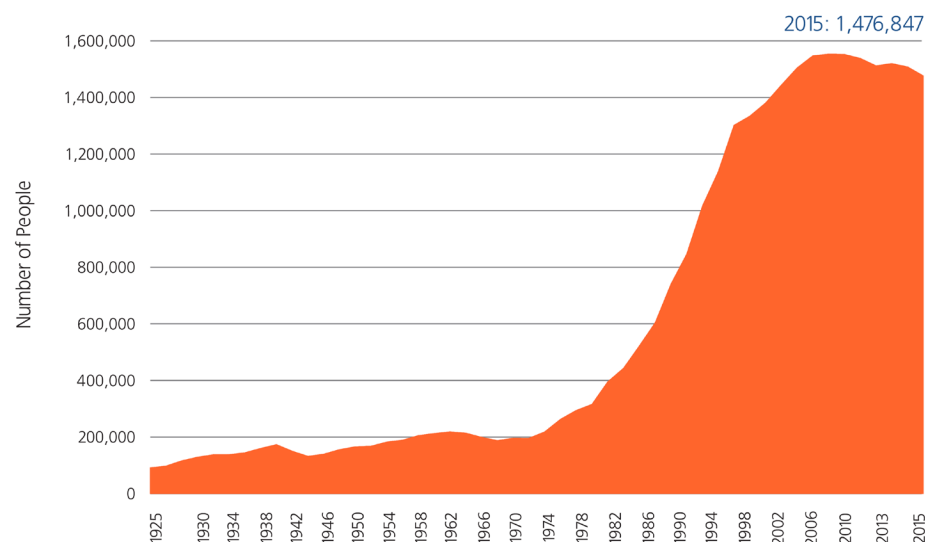
International Rates of Incarceration per 100,000



Source: Walmsley, R. (2016). *World Prison Brief*. London: Institute for Criminal Policy Research. Available online: <http://www.prisonstudies.org/world-prison-brief>.

image 55

U.S. State and Federal Prison Population, 1925-2015



Source: Bureau of Justice Statistics *Prisoners Series*.



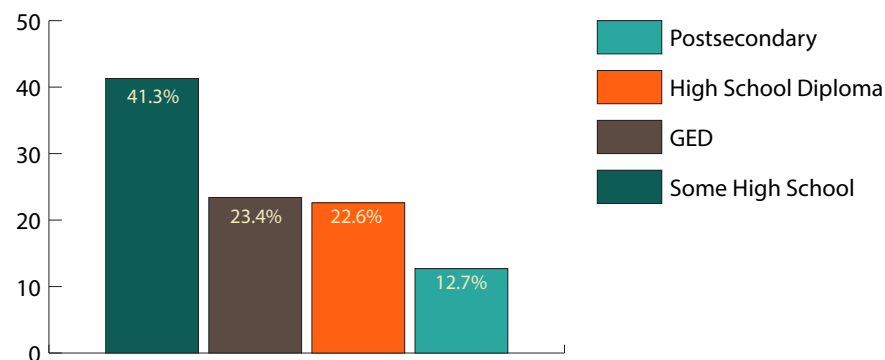
image 56

# Research

Studies show that while the chance of getting caught is an effective way to deter criminals, long sentences in prison do little or nothing to lower crime rates. (Nagin, 2013) Not only do long sentences do nothing for crime rates, they might actually end up doing more harm to inmates than we previously thought. "Evidence instead suggests that being locked away scars, stigmatizes and damages inmates. A history of incarceration has been linked to vulnerability to disease, greater likelihood of cigarette smoking and even premature death" (Brown and Patterson, 2016). These are only a few of the issues we see in people after years of incarceration. Not to mention the serious lack of life skills given to anyone who suffers life inside.

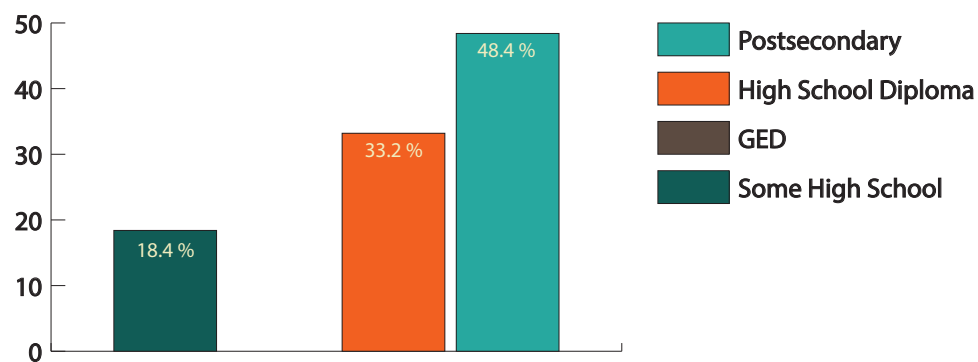
If America continues to lock people up at the current rate, there needs to be a change in the way rehabilitation is dealt with. Recently there have been changes starting to be made in how inmates are dealt with and what is being done in order to help their rehabilitation. Even with these recent changes, there is more we can do. With little to no technical skills or education, there are very few options for these individuals. It is for this exact reason that so many people end up reoffending. To change this, some correctional centers provide opportunities to be educated both in a classroom and in work environments. Classes provide an outlet to learn and advance in their education by passing their GED while work programs allow inmates to learn technical skills that will help them when they are released.

While America has done a great job of offering more learning opportunities, there needs to be a shift in the architecture that responds to these changes. Putting the needs of inmates first is key for the future of corrections. Having access to natural sunlight, nature and the immediate surroundings is a basic human right. These factors are all important when designing a healthy environment but there is still more that can be done, boundaries need to be pushed in order to make the necessary changes toward evidence based design.



Education rate of Incarcerated Individuals

image 57



Education rate of the General Population

image 58

# Research

## Methodology and Process

This study used articles and other published works to learn more about correctional centers around the world. The majority of these centers were located in Scandinavian countries, with a few located in other locations. The list of specific facilities and their features can be seen below. The goal was to get a clear picture of the current standing of correctional centers through case studies matched with research done by psychologists and other professionals. The information that was found was then used to deduce what key features should be included in a correctional center that focuses on improving the lives of inmates. A great deal of time was spent focusing on case studies from around the world. By looking at what has been done in a variety of correctional centers, conclusions were made about what the future of corrections could be. When looking at what the successful facilities had in common, it was easy to see what needs to be done.



image 59

To further the research on this topic, the author visited one of the American correctional centers she had been researching. Missouri River Correctional Center is located in Bismarck, ND along with the state penitentiary and youth correctional center. To say North Dakota has figured out how to deal with corrections is an understatement. The Director of the Department of Corrections and Rehabilitation of North Dakota, Leann Bertsch, has worked extremely hard to change the way North Dakota deals with inmates. She has turned to Scandinavian prisons to base policy changes on. Some of the biggest changes have been in how inmates are housed. Portable modular units were installed on MRCC grounds with the idea that good behavior will result in better accommodations. (Slater, 2017) Inmates responded to the changes with respect and gratitude in hopes that they would get a chance to move from the dorm style rooms into the individual rooms. The results of these changes have been two-fold, more freedom was achieved at the correctional center level and lower incarceration rates were accomplished within the state penitentiary. MRCC is one of few examples of open prisons located in America; another nod to Scandinavian prisons.



# Research

Before visiting Missouri River Correctional Center, it was required that all the proper paperwork be completed and returned. A background check was filled out, a research agreement was signed, and a Prison Rape Elimination Act compliance was acknowledged. These measures were taken before even entering the prison. Additional paperwork was filed before interviewing Department of Corrections employees along with registered architects. The institutional Review Board at North Dakota State University reviewed and signed off on all questions prior to interviews taking place. There were two sets of questions compiled, one for DoC employees and another for architects. Every question had a different purpose, some were intended to gauge knowledge, while others were meant to provide an opinion.

During the visit to MRCC, the author saw the grounds and buildings before talking to members of the staff. Through this experience she was able to get a better understanding of how correctional centers are run in the United States but more specifically, how this correctional center is run. The staff answered all questions and through that were able to discuss facts and opinions. The staff spends a great deal of their own time at the facility and know what is needed to run a successful program.

The interviews at Missouri River Correctional Center were conducted like a conversation. Two guards, a case manager, and the warden shared their thoughts, needs, and experiences. They were candid and honest through it all. They talked about the fact that they needed more room for education and vocation rather than wishing for larger, nicer offices for themselves. They each had an idea about what could be done to improve the way prisons are run. One idea was to include more outdoor classroom space to expose inmates to nature directly, another idea was to design a campus that allows inmates to structure their own days which would create a greater sense of normalcy.

Facility:	Natural Light	Cells	Dorms	Cabins	Open Prison	Large Grounds
1. Missouri River Correctional	●		●	●	●	●
2. Las Colinas	●		●			●
3. Leoben	●			●		
4. Bastoy	●				●	●
5. Mas d' Enric	●		●	●		
6. Halden			●			●

# Research

MRCC is laid out in a similar fashion to Bastoy prison in Norway but with a slightly different culture. Like Bastoy, there are separate buildings that house laundry, dining, vocation, and such. Norway is known for its progressive attitude toward corrections while North Dakota is known for being a very conservative state. Although North Dakota is a conservative state, overall, there is a relatively progressive attitude within the correctional system. They have worked to produce a system that heals and rehabilitates inmates instead of punishing them further. Facilities in other states would do well to introduce similar systems.



Bastoy, Norway

image 61



Bismarck, North Dakota

image 62

To complete the research, interviews were conducted with architects who design secure environments. Secure environments are anything that require extra security, such as mental or behavioral hospitals, juvenile correction centers and adult penitentiaries. The interviews were meant to gain a better understanding of what changes have been happening recently in the world of corrections. Some changes include incorporating more evidence based design which tend to be more humane. Hearing from professionals who work in this environment every day is key to learn about specific decisions behind the architecture. Knowing what is typically considered while designing a secure environment will further inform the direction of corrections.

The architects at BWBR were able to talk about real projects they have worked on and also some they have not worked on but have heard about. The interviews created a better understanding of what is happening in other parts of the nation and around the Midwest. A lot of correctional centers are being built for different security levels to account for the high volume of incarcerated individuals. The architects discussed their hopes for the future of correctional design, each one stated that they would like to see even more of a shift to focus on rehabilitation rather than retribution. Todd Warren, Senior Project architect at BWBR stated that he hoped the future would bring smaller, nicer facilities at a lower security level. Meaning there would be less of a need for high security facilities in the US. There is already a trend moving in that direction but there hasn't been enough of a shift to notice the changes nationwide.

Each architect was asked the same questions and given time to answer them privately. This was to ensure that all given answers were truly their own. There was no time constraint so they were able to talk freely for as long or as little as they wanted. Every person gave a variety of answers, as such, some overlapped and some were completely unique.



# Research Results

After researching several examples of correctional centers that were designed to rehabilitate individuals, the realization was made that there are a few specific features most centers have in common. Every element is included for the purpose of creating a healing space that will help end the cycle of incarceration. Not only does it humanize the space, but it moves toward a realistic transition into society.

## LARGE GROUNDS

According to Help Guide.org “exercise is one of the most effective ways to improve your mental health. Regular exercise can have a profoundly positive impact on depression, anxiety, ADHD, and more. It also relieves stress, improves memory, helps you sleep better, and boosts overall mood” (Robinson, Segal and Smith, 2017). It was discovered in 2006 that 56 percent of state prisoners have symptoms of serious mental illnesses. By designing spaces to include larger recreation areas, we give inmates the tools to better themselves. Sports can be used not only as a way to blow off steam but also as a team building exercise or learning tool.

Some low security prisons allow inmates to move about the space by themselves, even allowing them outside in the recreation area for more than an hour at a time. Walking is some of the best low impact exercise a person can get. Utilizing the large grounds does not have to only include exercise. Being outside, close to nature is said to calm individuals and help boost their immune system. Relaxing outside in the sun can be some of the most peaceful moments of the day.

## AN ABUNDANCE OF NATURAL LIGHT

Sunlight is said to improve people’s overall mood. “Exposure to sunlight is thought to increase the brain’s release of a hormone called serotonin. This is associated with boosting mood and helping a person feel calm and focused. Without enough sunlight exposure, a person’s serotonin levels can dip low. Low levels of serotonin are associated with a higher risk of seasonal affective disorder (SAD). SAD is a form of depression that is triggered by changing seasons” (Avery, 2017). Due to the fact that we live in the northern hemisphere which gets less than 10 hours of sunlight per day in the winter SAD is more prominent. Having access to sunlight is all the more important in climates that experience long winters. With a natural mood booster, it is less likely that fights or disruptions will occur.

## ACCESS TO NATURE

Access to nature can create a serene experience. Typical prisons allow inmates very little time outdoors and the time they do spend outside is commonly surrounded by a fence with the only nature being grass and maybe a few shrubs. While some prisons can do nothing about the minuscule access to nature, there are always ways of improving the situation. A study published in *Frontiers in Ecology and the Environment*, showed that even images of nature create a greater sense of calm in inmates. (Nadkrani, Hasbach, Thys, Crockett, and Schnacker, 2017) By adding nature imagery in places that everyone has access to, it naturally creates a calm atmosphere. Many prisons in America are built in rural areas or away from large cities. This is intended to increase safety and security but also because rural land is typically cheaper than urban areas. One positive to placing prisons in rural areas is that they have a lot of room to utilize. If the grounds of prisons were planted with trees, flowers, and other vegetation the culture of the place would shift.

## MULTIBED OR SINGLE BED DORMS

The biggest change from prisons designed for retributive justice to reformative justice is the way inmates are detained. Retributive justice is the idea that justice will be served by those who commit crimes. There is little room for rehabilitation in the world of retributive justice. Reformative justice on the other hand works hard to rehabilitate individuals who end up in prison. It is based on the thought that proper rehabilitation will end the cycle of incarceration.

Some facilities that were researched have both single and double bed dorms but none have cells. Jail cells are often associated with life in prison, they are almost always the first thing that is pictured when thinking about incarceration. In order to rehabilitate individuals, it is important to introduce them to a world that is similar to the one they will experience when they are released.

When talking with the guards at MRCC, they stated that the decision to add single bed rooms in addition to the multi bed dorms was made in order to get people ready for the world outside of prison. They discussed the fact that it is not normal to live in a cell with no privacy or freedom. It is understood that everyone who is given the right to their own space in a single bed dorm will be responsible for keeping it clean. The goal is that they will learn why responsibility and accountability is so important.

The DoC employees talked a lot about the importance of “normative experiences”, this is the idea that inmates should experience a life that mirrors life outside of prison. Giving inmates responsibility for their own space introduces them to the kind of things they will encounter later. There are ways that the architecture can support these changes and will make for a very successful future.

# Research

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image 63



# Research

## Conclusion and Projection

The most prominent conclusion that came through this research proved that the situations inmates are put in directly affect the way they act during their incarceration and even after they are released. More humane prisons change things such as the rate of violence in prisons and the rate of recidivism. To put it simply, the better the facility, the better the outcome. There will always be an exception to the rule but for the most part this is proven to be true. A women's detention facility in San Diego made drastic changes to the architecture and landscape of the prison and immediately saw positive results. There was less violence between inmates and between guards and inmates. It should not come as a surprise that the architecture of a space effects those who inhabit it.

There is a lot more we could be doing on both the state and federal level to decrease the rate of recidivism. The changes need to start from within the prison system. Part of the solution should be to increase the amenities for inmates who prove they deserve it through good behavior. Amenities can be things as simple as better housing situations that have larger windows and a view of nature. As previously discussed, inmates who are granted more access to sunlight, nature, and room to move, are generally healthier, both physically and psychologically. Each of these things is a basic human right and should not be considered the only award for good behavior. Instead they should be awarded with extra opportunities for education and vocation. Preparing them for a life after prison is the best way to reduce the rate of recidivism. Give them the tools to succeed and they will do just that.



image 64

Most of these people have probably had little opportunity for success in their lifetime and just need a chance to prove themselves. Simple things like allowing them to schedule their own days can do a great deal for their confidence and self-worth. This can be accomplished in a variety of ways. A lot of prisons are designed as one building that is sectioned off for different uses. There has been a lot of success in low security facilities that are designed in a campus style layout with totally separate buildings. Typically, people have to leave their house to go to work, school or the gym which begs the question, why should this be any different in prison? A campus style facility forces people to live a life that is similar to what is experienced everyday by the general public.

Retributive justice would never allow these changes to happen, however, with the changes in our penal system we see a change in the way prisons are run. Reformative justice focuses on the needs of the inmate, security will always come first but reform should be a close second. By following the lead of Scandinavian prisons, America could decrease individuals who end up in the revolving door that is currently our correctional system.

It has always been that the majority of prisons are designed prior to a policy being put in place, and after that is filled with inmates. It is practically unheard of to design a prison based on the policies that are already in place or to design a facility that responds directly to the need of inmates. If this shift in thought were to occur, the entire future of corrections could change.

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# Project Justification

This project started out as just an interesting topic for me to research. It all began while I was driving through St. Cloud and noticed how beautiful the prison was. I realize how weird it is to consider a prison beautiful but with its large stone exterior and tall walls it looks more like a castle than a prison. It made me think of all the poorly designed prisons, jails, and correctional centers in the United States. I do not understand why an architect would design any building with little thought or effort, no matter the typology. Not only are many of these facilities ugly, they are also unhealthy environments. I started to wonder why places that effect our society so greatly are built so poorly.

When looking at the incarceration rates of America compared to other countries, it is pretty clear we are missing out on something substantial. Norwegian countries were some of the first to embrace change and their society has benefitted greatly from it. Norway now has the lowest rate of recidivism in the world. I have hope that if America embraced this kind of change that we would see the same positive results.

# Project Justification

The reason I have become so passionate about this topic is because as architects we have the opportunity to make a real change in society. It is not hard to see that prisons are detrimental to society but no one is working to change the reality. If we don't do something about it, no one will. If we don't care about this issue that plagues our nation, no one will. It was this thought that made me realize how important this topic is. As architects, we agree to uphold human rights in all our professional endeavors. We often talk about the importance of influencing the health, safety, and well-being of society but that stops short when it comes to corrections. It seems as though we have forgotten that inmates are still people who deserve a certain quality of life that does not consist of four brick walls and minimal sunlight.

Prison design is extremely complex because of the security measures that have to be taken. There are numerous factors that must be considered when designing within the typology of corrections that are not discussed when working with buildings of a different classification. For this reason, I believe it is a suitable thesis project. The research and design that comes out of this year will showcase my skills within architecture. I will demonstrate the knowledge and skills I have acquired through my education and work experience by completing and presenting a project.

# Historical, Social & Cultural Context

This project is similar in typology to examples that are scattered around the world. Every country has their own version of a prison to deal with criminals. America is known around the world for our expansive penal system and long prison sentences. Other countries have made changes to ensure their prisons are healthy environments for the people who inhabit them. America has started making moves to evidence based design but still has the highest rate of incarceration in the world along with the highest rate of recidivism. The lethal combination creates a revolving door for the world of corrections. Many of the same people are ending up incarcerated on top of new detainees every year.

There is a lot we can do to change these statistics. Some communities have already implemented these ideas and experienced great results, which is why we see it expanding throughout the world. These developments are relatively recent in the spectrum of prisons. Prisons have been around since the early 1100s, beginning with crude designs that had very little concern for humanity and later advancing to structures that focused on healing. Although there are still a lot of jails and prisons that are designed to oppress inmates, we are seeing more examples than ever before that center around reform.

Creating a space that is therapeutic instead of demoralizing is a great way to start. Studies show that individuals who learn skills to survive and work outside of prison do better. Learning how to reenter society successfully can be a huge challenge for people who have spent years inside prison walls. Society and technology is constantly changing. It is important to give these people the tools they need to succeed in order to lower the rate of recidivism.



# Historical, Social & Cultural Context

During the 1980's, society called for harsher punishment due to a rise in violence within prisons. What came out of this was Supermax prisons that are still used today despite the proof that they do more harm than good. They were meant to house the worst of the worst because no one knew what else to do with them. As of 2005, there were 40 Supermax facilities within the United States. One of the qualifications of Supermax is extended solitary confinement. Inmates are typically housed for 23 hours of the day with little to no contact with other individuals. They used solitary confinement as a further punishment for bad behavior and never questioned why the behavior of inmates didn't improve. It wasn't until recently that people started trying new things within prisons.

Extended periods of time in solitary confinement has proven to be extremely damaging to a person's psychology. Studies done by Stuart Grassian, a board-certified psychiatrist found that "solitary can cause a specific psychiatric syndrome, characterized by hallucinations, panic attacks, overt paranoia, diminished impulse control, hypersensitivity to external stimuli, and difficulties with thinking, concentration and memory. Some inmates lose the ability to maintain a state of alertness, while others develop crippling obsessions."<sup>1</sup> Most people cannot imagine being locked in a room by themselves for days; so why would we ever do it to someone else? With research being done to prove the damages of solitary confinement, there is no reason to continue extended use.

Most architects agree that there is still a need for segregated housing units in some cases but only for short periods of time. They are now being used more as a "time out" for bad behavior instead of a long-term punishment. People have started discussing the fact that going to prison is punishment, they should not be punished further while they are there. Some prisons reward good behavior instead of punishing bad behavior to work on encouraging good behavior habits.

# Historical, Social & Cultural Context

Within the last few decades, correctional centers have become a popular solution to the long-standing question of how to reduce recidivism. After years of using the same model for designing prisons, it seems as though architects are ready to try something new. The positive results are reason enough to continue with this program. Many psychologists support this transition and have done studies to show that it is the right move.

Some might believe that it is not the place for psychologists but they have been able to shed light on the mental health downfalls within the prison system along with starting a discussion about the root of criminal behavior in people. It used to be that people with mental disabilities were taken to hospitals that could cater to their needs but with the closing of many state hospitals, a lot of mentally ill individuals who commit crimes end up in prison. It is recorded that 14% of federal prisoners and 26% of jail inmates meet the threshold for serious psychological distress. Most of these people will not receive any counseling or medication while incarcerated.

If we were to change the policies within American prisons to be healthier for all inmates, there would be less of a chance that someone with mental disabilities would end up worse than when they came in. Some solutions do not cost the state anything. Things like allowing more time for recreation outside are free and create a healthier atmosphere.

# Historical, Social & Cultural Context

Currently there are no examples of evidence based prison design in the Midwest. It is a new idea to prison design but something that has been used for decades in other areas of design, such as hospitals and clinics. When it comes down to it, hospitals and prisons are both simply buildings with rooms with beds. They might serve a different purpose but at the root of the design they are extremely similar.

Evidence based design in prisons has proven to be a successful endeavor. By changing the way we think about the architecture we are able to better serve both the employees and detainees. Recently, prisons have changed the conversation to focus on reform rather than retribution. After years of using this model in Scandinavian countries, America is finally testing it out. The Director of North Dakota Department of Corrections, Leann Bertsch is heading this transformation at facilities in North Dakota with great success.

They have made some simple policy changes at both the state penitentiary and the low security correctional center. These changes reflect the way most Scandinavian prisons run; with more inmate guard interaction and less time in solitary confinement, they have seen inmates transform. One of the biggest changes was preventing individuals from going straight from solitary to being released. They recognized that this practice prevented inmates from making a successful transition so they changed it. If more facilities were willing to try something new we could start to see a change in the rate of incarceration.



# Historical, Social & Cultural Context

Missouri River correctional center opened in 1992 after the completion of the main dorm building. There was a plan for four phases of construction to take place on the site over a period of time. However, two of these phases were never completed due to funding. The loss of those spaces has been detrimental to the function of this facility. The staff and inmates make do with what they have but are in great need of updates.

Most buildings on the site were built in the 1940s and are falling apart. Several of the buildings don't have air conditioning while others would struggle to pass code compliance. With all these issues, inmates rarely complain. They are given a great deal of freedom, with no fences around the perimeter they are able to walk freely through the grass and trees surrounding the campus. I believe it is so successful because of the way it is run.

MRCC works on the idea that most of these men will be getting released from prison in a short time and the way they are treated while inside will directly reflect in the way they act when they are out. They are rewarded for good behavior by being given more freedom. This comes in the form of a private room and nicer day room, along with weekly trips into the city of Bismarck. The warden believes that the more normal the experience is before being released, the better the chance they will have at succeeding after.

# Historical, Social & Cultural Context

The city of Bismarck, ND is known for many things but few people know it for the correctional facilities there. It is home to the state penitentiary in addition to the men's correctional center and just across the river is the youth correctional center. For a quiet, small town in the Midwest, it holds a large population of criminals. With the exception of the juvenile correctional center, which houses both male and female, all of these facilities house men. At the time of opening, Missouri River Correctional Center housed both men and women but later changed to an all-male correctional center.

While MRCC sits on the outskirts of town, they allow inmates to make frequent trips into the city of Bismarck for things like shopping trips or dentist visits. This is all in order to prepare them for the world after release. With the rapid changes our world goes through, the staff at MRCC work to keep inmates up to date on technology and education. iPads are used in classrooms and inmates have access to a computer lab during the day. Technology is a huge part of our society and key when expecting inmates to be marketable for jobs.

Bismarck was founded in 1872 under the name Edwinton and later changed to Bismarck to honor the German chancellor Otto von Bismarck. Nearly 70 years later, buildings were being constructed on the current site of Missouri River Correctional Center. Many of those buildings are still standing and utilized by the staff and inmates of MRCC. The buildings that were built in the 1940's are dilapidated and need to be replaced. The late 80s and early 90s brought promise to the community of corrections. There was a project proposed to be built in four phases but only some of it was completed. Due to the lack of funding for correctional centers the redesign was never completed.

# Performance Criteria

There are several things you could judge the success or failure of a project on. Listed below are the performance criteria that will be considered when designing. Upon its completion, these are the things it will be judged on.

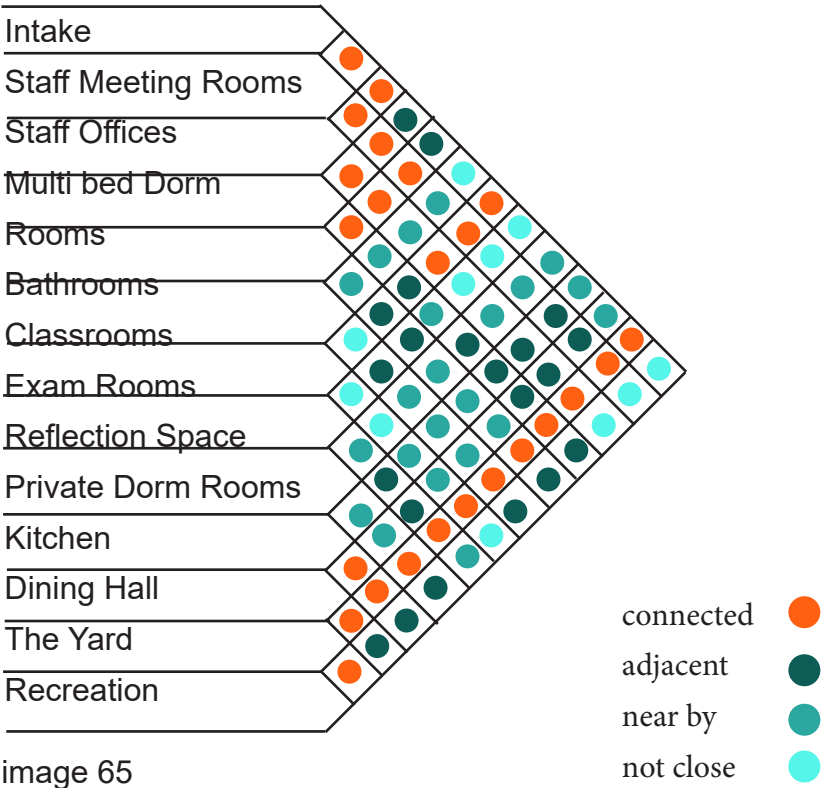


image 65

Spaces	Square Feet
Staff Meeting Rooms	250 - 400
Staff Offices	150 - 300
Classrooms	250 - 350
Intake	350 - 500
Exam Rooms	150 - 200
Nondenominational Reflection Space	1000 - 3000
Private Dorm Rooms	100 - 250
Multi bed Dorm Rooms	300 - 500
Bathrooms	200 - 400
Kitchen	2000 - 3500
Dining Hall	3000 - 5000
The Yard	900 acres
Recreation	100 acres



# Performance Criteria

## 1. Space Allocation

There are a few specific spaces that must be included within a prison. I will consider each of these when designing and decide how much space each one needs based on the amount of beds the facility has. A lot of prisons deal with overcrowding which is something to consider and plan for when designing a prison. Planning for the future is hard to do in this situation because you never know what way corrections will go. I will turn to the professional who work in this setting every day for advice and knowledge. Recent trends will tell me what direction the world of corrections is headed. I will use computer renders as a final product to be judged and create conversation about what aspects should be improved on.

## 2. Energy Consumption

Currently the buildings at MRCC are extremely outdated. Some of the buildings don't even have air conditioning. With the hot summers of North Dakota, it is not healthy to have people utilizing spaces that cannot provide air conditioning. Because of the old technology that is being used, there is actually more energy being consumed because they are inefficient. A new system along with better insulated buildings could decrease the energy consumption.

Along with new mechanical systems, new appliances should be put in the kitchen and laundry rooms. With how many people are using these appliances, they need to be highly efficient and long lasting. Energy star rated appliances will cut the energy consumption in the kitchen. With these small changes, the whole facility could be a lot more sustainable.

## 3. Environmental Performance

Due to the fact that the site is in a rural area, there are no noise ordinances. However, I will still work to improve the acoustical value of the spaces. With large open spaces in the reflection room and dining room, it can get very loud. Using materials to counteract the reverberation will decrease the noise level naturally.

Thermal quality of a building in North Dakota is very important. We suffer very cold winters and overly hot summers. Improving the thermal quality of the building will not only make it more comfortable but it will also make it more sustainable.

## 4. Behavioral Performance

In most projects, there is an element of surprise when learning how people use the space you have designed. However, in prison design the goal is to have no surprises. Everything must be considered and accounted for before allowing inmates into the space. Working with the staff at the facility will be key when determining how the layout should proceed. Knowing how they plan to move inmates through the spaces will change how I design the facility. After learning how they will use the space I will utilize codes to learn the standards for specific aspects of prisons.

# Performance Criteria

## 5. Psychological Impact

The whole goal of this project is to ease the negative psychological impact on those within the space. The final result of my design should in turn create positive, therapeutic spaces that heal inmates and help them return to society successfully. I will use information found in case studies to base my design goals on. These case studies will also help to judge whether or not the project is successful.

## 6. Environmental Impact

Currently there is relatively low environmental impact on the site due to the fact that there are no fences to disrupt the natural ecosystem. Animals that live in the area are allowed to move freely just the same as inmates. When designing a new facility, I will use local materials and construction companies to generate jobs in the area. Some of the construction on the site would be able to be done by inmates as a part of their work program. This will greatly decrease the cost of labor as well as teaching these men a trade.

## 7. Code Compliance

The buildings on the site today were built so long ago that they no longer fit current codes. By updating the buildings, we are able to follow all the necessary codes. Codes for prisons are more strict than typical industrial design because of the people who will be using the space. There might be some leniency due to the fact that this is a low security facility but it is better to plan for the worst and hope for the best when considering prisons. I will turn to architects who design secure environments to judge the success of code compliance.

## 8. Cost

This project is considered a state funded project and thus would go through several rounds of meetings to decide on the budget. A huge obstacle when designing prisons is public perception. Most people do not want to pay for something that looks to "nice". A lot of Americans want to see that prisoners are being punished but because that is not the focus of this project I will tread the line between form and function. I believe the best way to go about this is to scale down the form and amp up the function.

# Performance Criteria

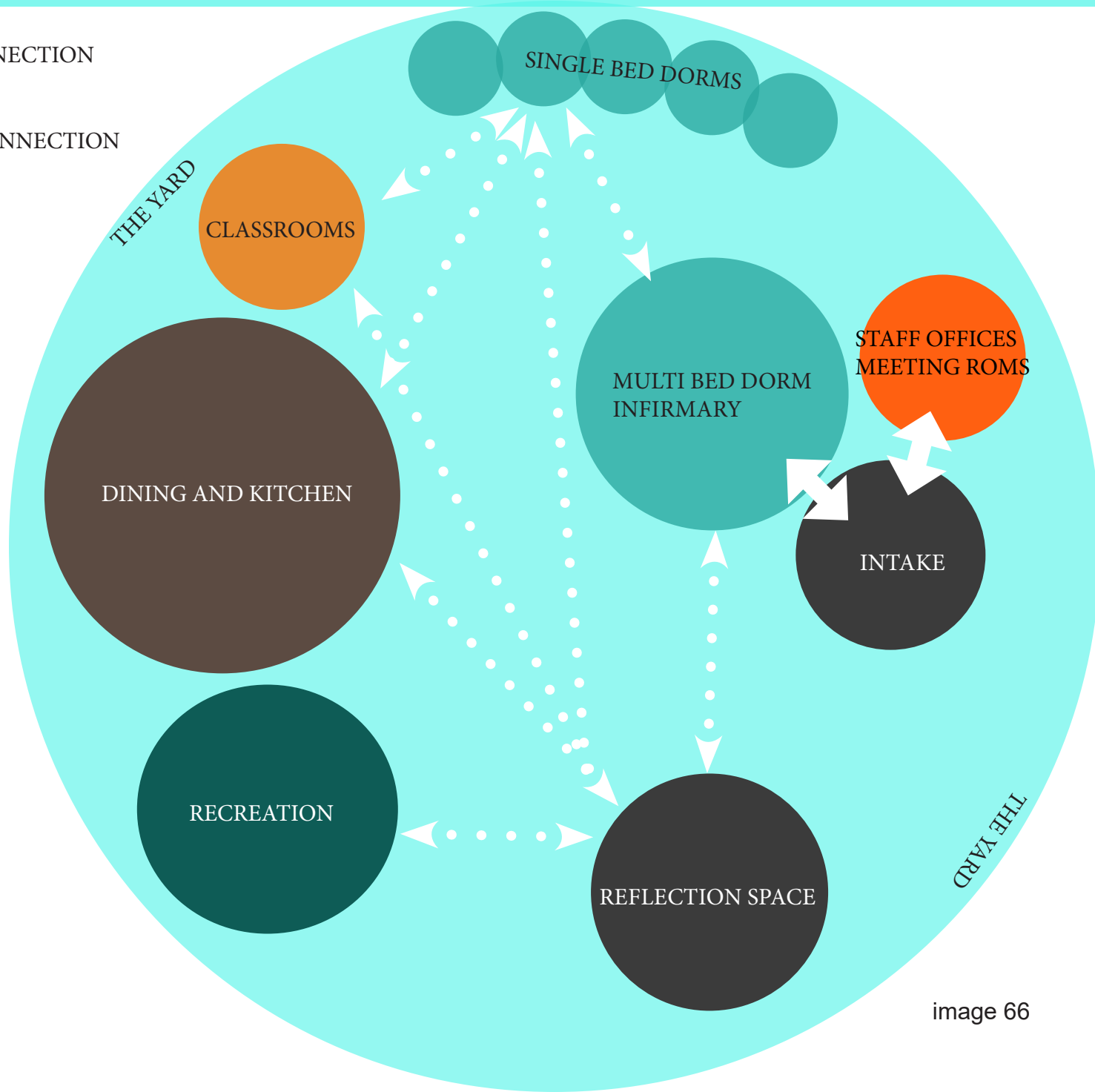
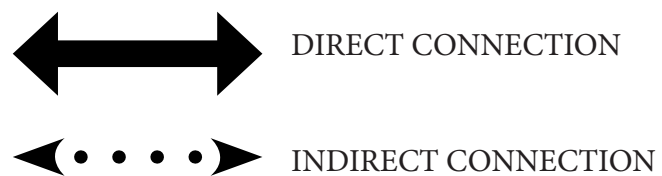


image 66



# Process Documentation - Shared Dorm

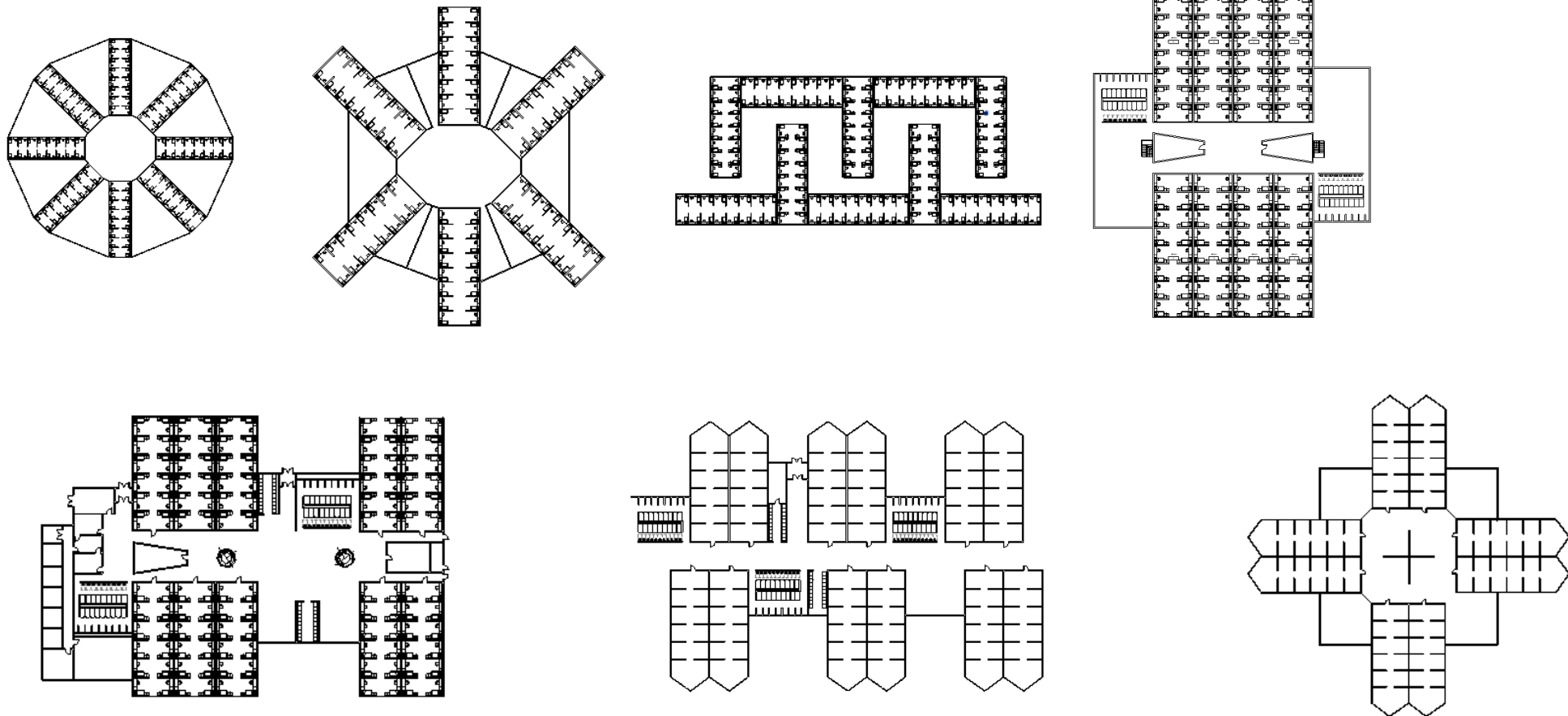


image 67-73

The first building I started designing was the shared dorm space because I knew it would be one of the most complex buildings due to the wide variety of spaces within it. The spaces ranged from staff offices and break rooms to inmate sleeping quarters and day rooms. I went through a lot of different designs before I settled on one that I thought worked best. It allows for a lot of open community spaces while creating a natural barrier to the wings which are more private spaces.

# Process Documentation - Education

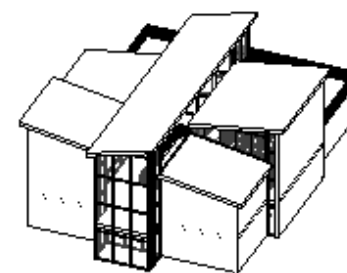
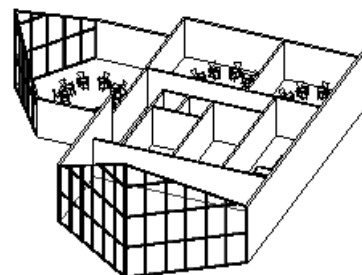
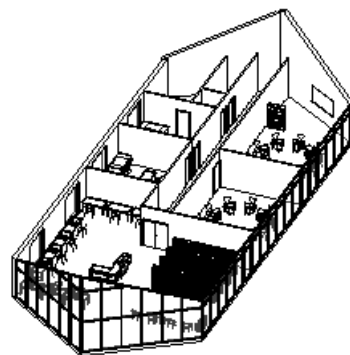
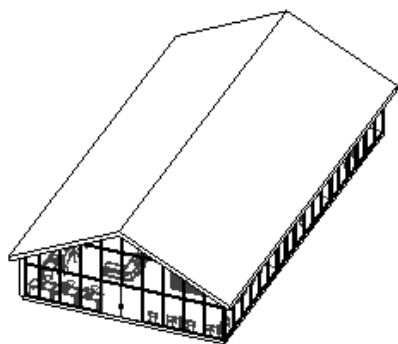


image 74-77

During my research I read a lot about the importance of education in the rehabilitation process. Some prisons offer as much as graduate level courses to inmates who want to further their education. I see no reason why MRCC cant make the move toward offering higher level education courses here. Studies show that a higher level of education directly correlates with a lower level of crime. If we can work to educate the individuals who have fallen into this cycle of incarceration and release maybe we can break the cycle which will change the future of incarceration.

# Process Documentation - Gymnasium

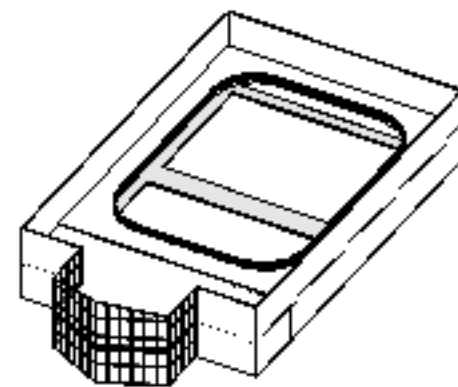
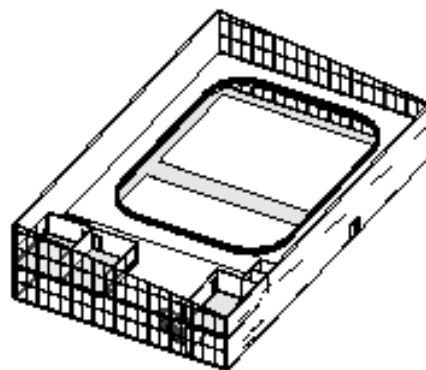
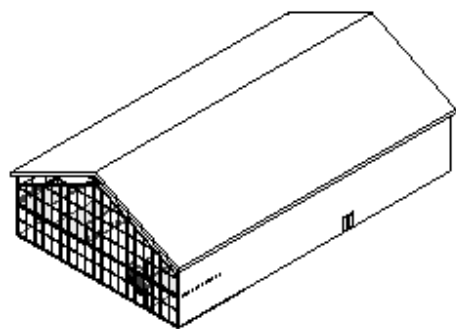


image 78-80

The gymnasium really allowed me to play with different ideas of what is possible in this space. In my initial sketches I had a small workout room with little natural light. I quickly moved away from that to give inmates the opportunity to use this space as we use a gym. When we are upset or frustrated we go for a run or blow off some steam with a workout so why do we expect that men in a naturally high stress environment should not be afforded the same opportunities? I included two full size basketball courts with a track on the mezzanine level, free weights, and rooms that can be used for dance class, yoga, meditation, or something else completely.



# Process Documentation - Single Dorm



image 81-85

When I started this building, I imagined it to be something like a college dorm. Each person would get a single room with a shared bathroom between and it would be their responsibility to clean them. A major issue to consider when preparing men to reenter society is how they have lived for the past several years. A lot of men do not know how to deal with the silence they experience when trying to go to bed at night. Imagine living for 5 years with no walls to close off the sound of your neighbors and then one day trying to fall asleep in complete silence. It would be maddening for anyone. Moving from a shared dorm to a single dorm before leaving prison allows for a smooth transition.

# Process Documentation - Cafeteria

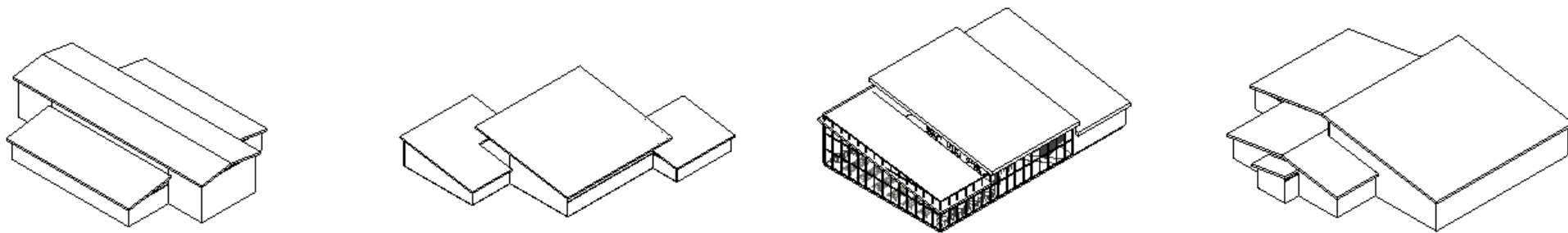


image 86-89

I thought of the cafeteria as a place to encompass a few of the ideas I had been studying- I aimed to design it in a way that would encourage the growth of a community as well as allowing for views of nature. The idea behind the cafeteria was to provide an oasis of sorts. The cafeteria is a place that most inmates will come to at least two times a day so I wanted it to allow for a dream of what life there is to come. Thinking about the summer sun when it is -30 degrees outside or thinking about places they will be able to visit after they leave here promotes a different way of thinking.

# Project Solution - Shared Dorm

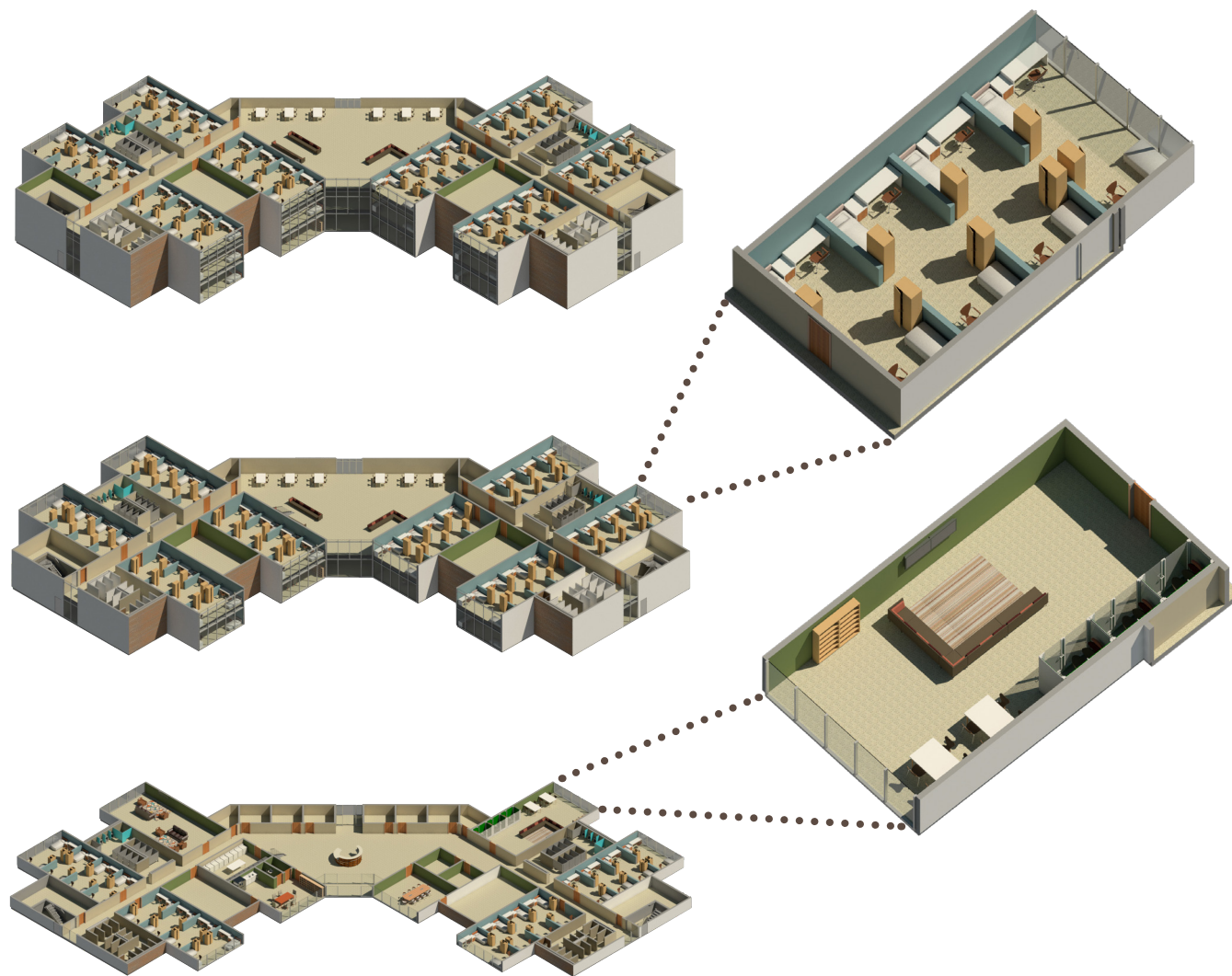


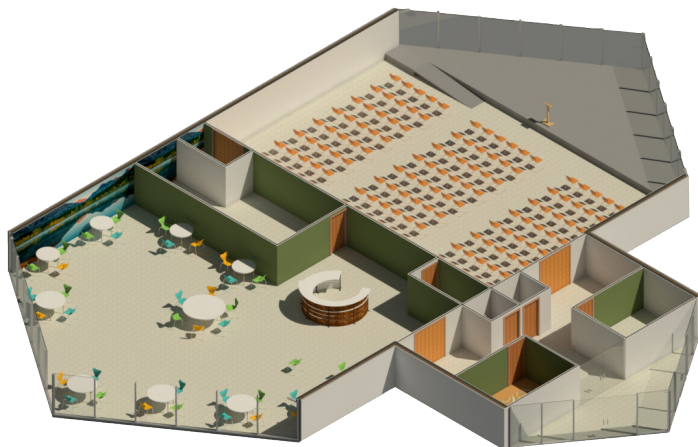
image 90-95

During the interview process I met with the warden of MRCC to discuss what they would want in a remodel. One of the biggest things I took away from the meeting was their dire need for more staff spaces. They are currently using closets as offices and even that does not provide them with enough space. In my final design I added offices for every staff member along with a conference room and break room. While the main focus for this project is the inmates, staff retention and moral are important factors to consider.

The current layout of the shared dorms are awkward which creates a lot of wasted space. My design moves toward a more efficient layout that creates a sense of privacy. Putting less men in a room diminishes the possibility of fights or disagreements. Soft materials and calming colors are used to give the rooms a feeling of comfort and home.



# Project Solution - Meeting Space



This image shows the reflection space. Incarceration allows for a lot of self reflection and I believe it is important to have a space dedicated to that. This could be used for a church service of any religious denomination or could be used as a large group gathering place for things such as graduation ceremonies. MRCC holds graduation ceremonies for the men who get their GED, it is a celebration with family and friends.



image 96-97



# Project Solution - Meeting Space



image 98

I think this is one of the most important buildings on the campus. I read articles about the importance of family interaction while incarcerated but it really struck home listening to a podcast called Ear Hustle. It is recorded from inside San Quentin State Penitentiary and available for the public to listen to. A couple of the episodes talked about the anticipation that is felt by an inmate waiting for a visit with family and the extended feeling of happiness that is felt even after they leave.

I wanted to create a space that was open and inviting. The high ceilings and expansive windows allow for tons of natural light and views of the forest on the edge of campus. This image depicts the family meeting room where inmates can hang out or play board games with their families. Because they do not get any real private moments together I thought of this place as a kind of family room setting. Think of your family sitting around the kitchen table talking or playing games on game night- I wanted to bring that same feeling into this space.



# Project Solution - Meeting Space



During my talk with the warden at MRCC we discussed his thoughts on solitary confinement. Because this is a low security facility there should be no need for solitary confinement. Instead I included two private “cool down rooms” these are intended for the men to take a few minutes to cool down or collect their thoughts. A large portion of the population here would live in shared dorms which does not allow for a lot of privacy or alone time. These rooms would give them the opportunity to remove themselves from a negative situation.



# Project Solution - Education

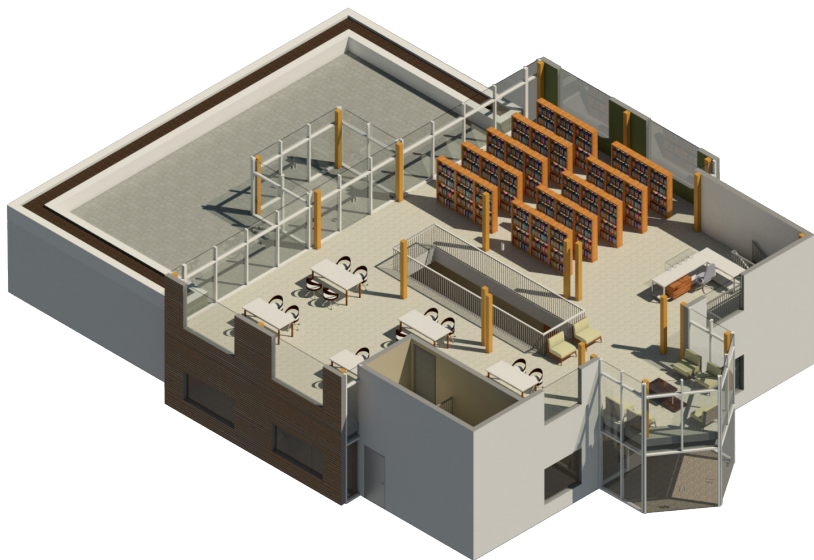


image 100-102



Including rooms where a typical class can take place allows for the opportunity for advancement in their education. They can work towards getting their GED or use the computer lab to take college courses online. The second floor of the education building is comprised of a library and open study space. This allows for inmates to study and learn together.



# Project Solution - Education



image 103



# Project Solution - Gymnasium

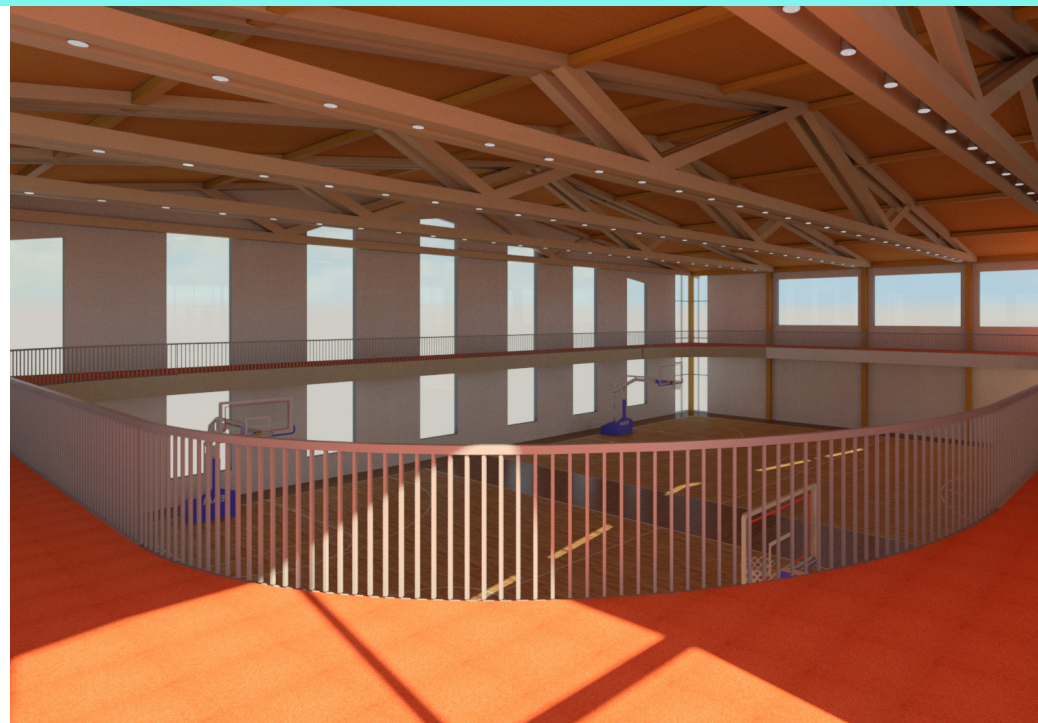
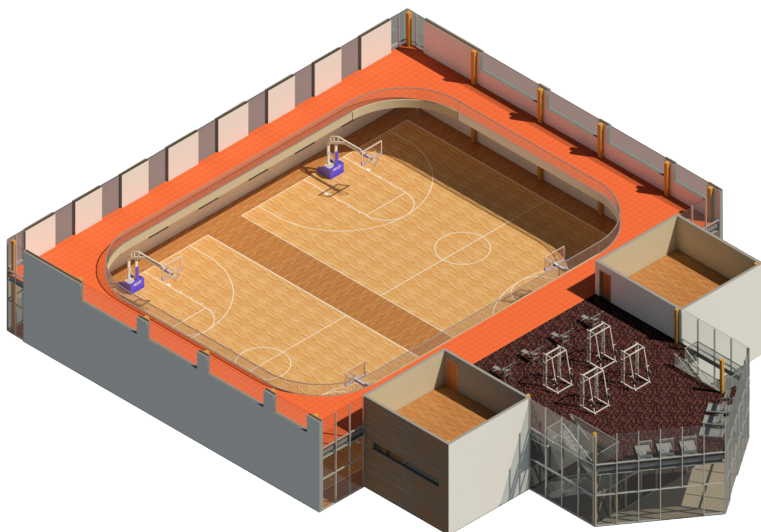
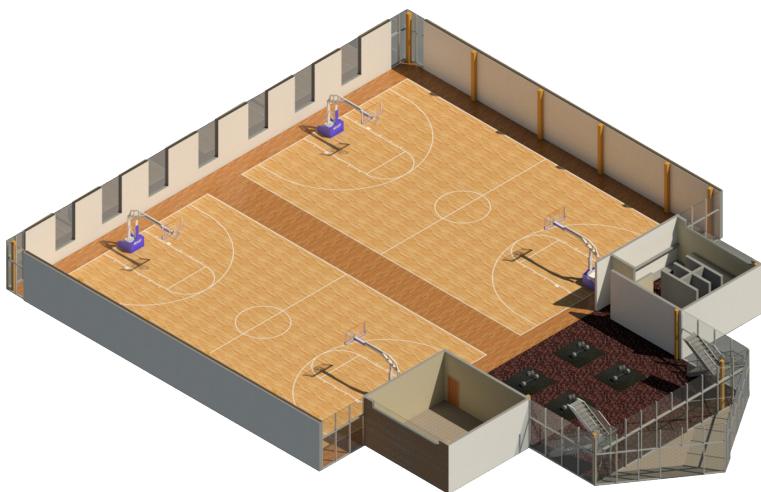


image 104-106



Including basketball courts and a track might seem like a luxury to some, but it was actually very strategic. Playing team sports is a great way to teach team building skills, anger management, and work on problem solving. Each of these things are a part of daily life and can be taught during incarceration. Having an indoor recreation area was important because of the location of this facility. No one should be expected to play a game of basketball outside in North Dakota in January.



# Project Solution - Gymnasium



image 107



# Project Solution - Single Dorm

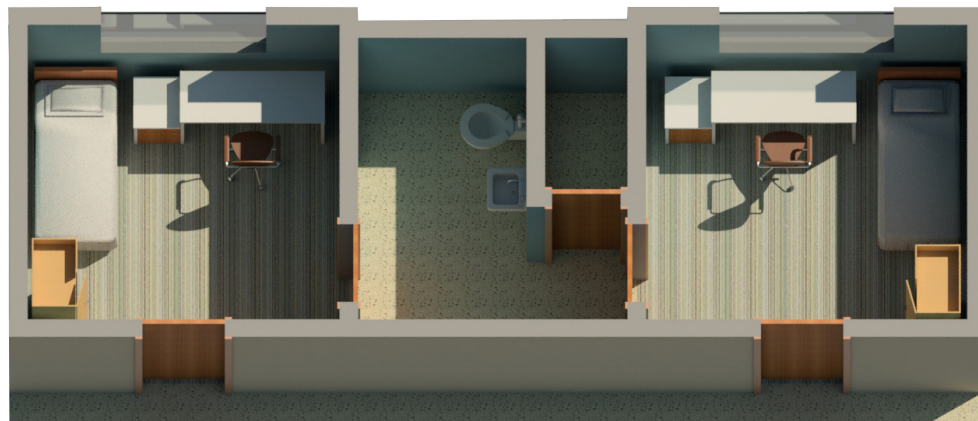
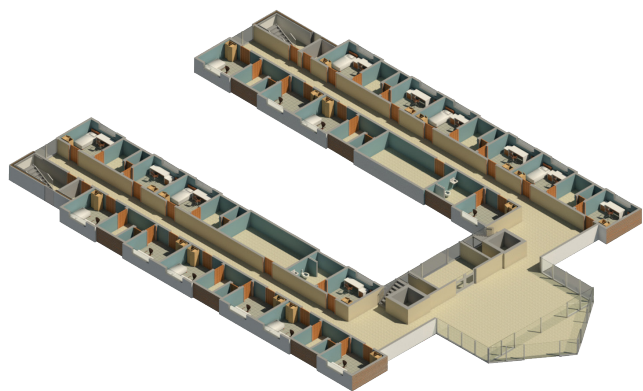
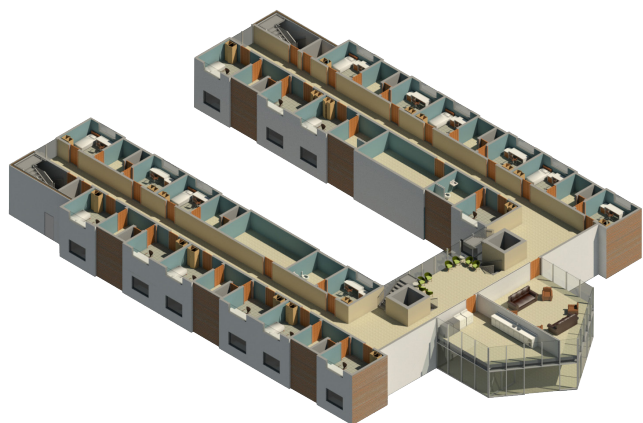
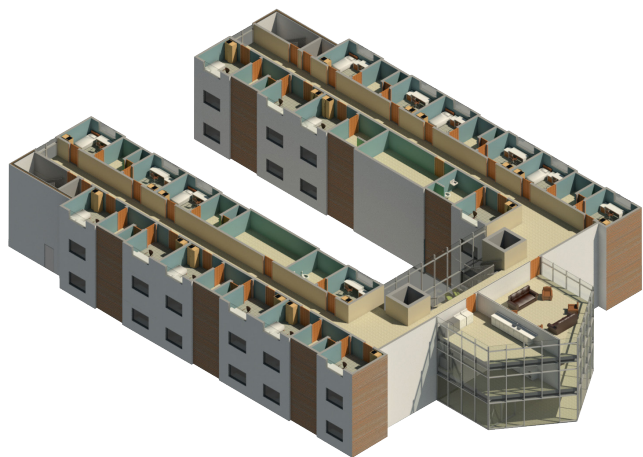


image 108-112

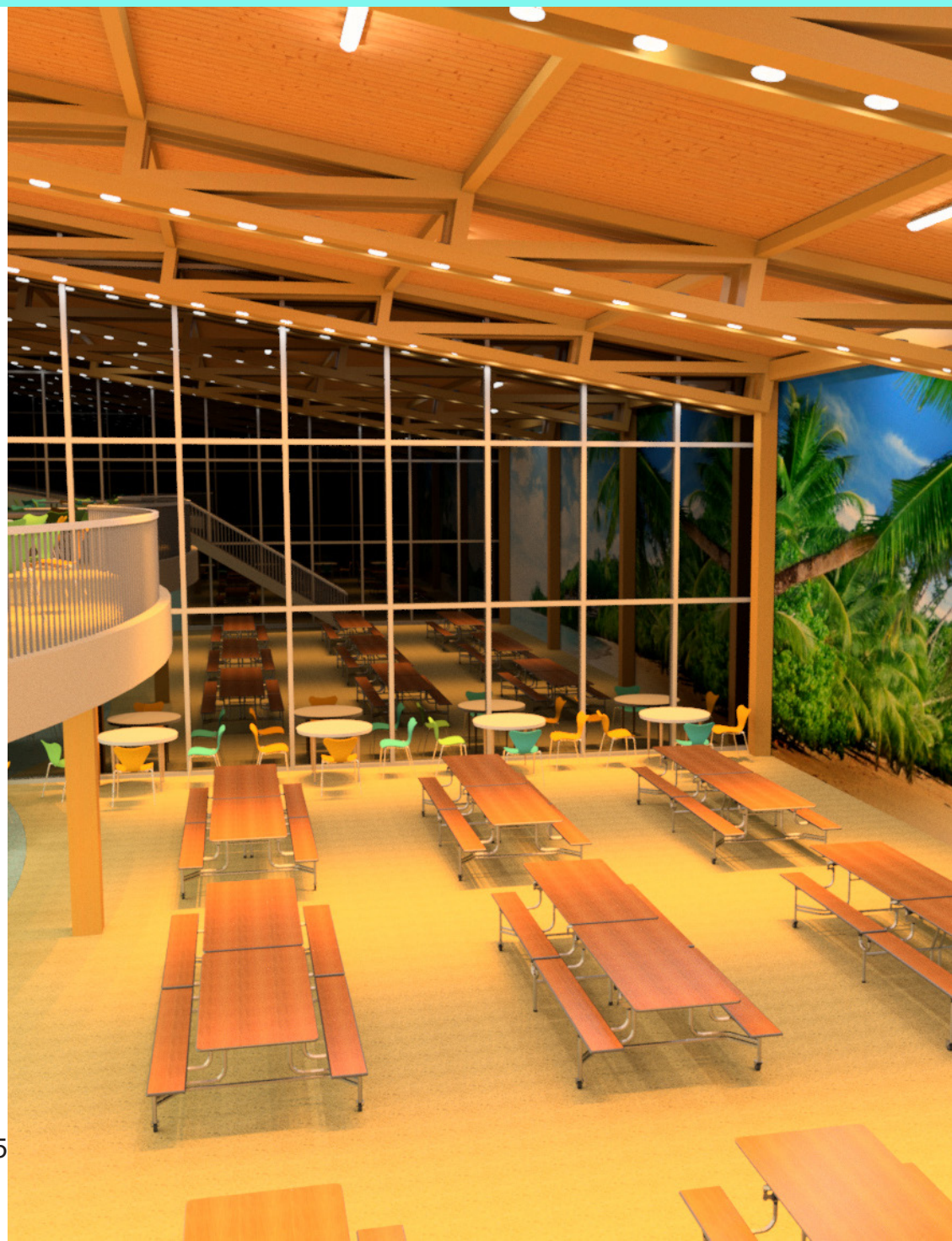




# Project Solution - Cafeteria



image 113-115





# Project Solution - Cafeteria



image 116



# Performance Analysis



image 117

Because of how large the site is I could have decided to design almost anywhere but I wanted to preserve as many of the old oak trees as possible. Instead, I incorporated paths that wind through the site where inmates and their families can explore the natural landscape of the site. The circular layout of the buildings came from some of my initial research into the history of prisons. Panopticon was an idea that allowed the inmates no interaction and no privacy. Everyone was reduced to a cell where they were watched at all times by a central guard tower. The circular layout shows where we came and where we can go from here. Instead of a guard tower in the middle to show intimidation, there is a tree at the center of it all to represent hope and growth.



# Performance Analysis



The sidewalk represents the path of life. Life is hard and confusing at times but it is worth it to take the long way around. This path also represents what inmates will experience when they are released. There will always be options as to what path to take and it is their responsibility to make the right choices to reach their goals. While incarcerated they will be given the tools to make successful decisions after they are released.



# Performance Analysis



image 119

Spending time outside is very important for everyone, incarcerated or not. The open courtyard allows views of nature as well as giving everyone the opportunity to be in nature everyday. It simulates a normal lifestyle and forces inmates to go outside for their day to day tasks. Just like we have to go outside to get to the library or gym, they will have to do the same. It will encourage healthy lifestyle choices and promote responsible scheduling.



# Designing for Humanity

A look at how the architecture of correctional facilities impacts inmates

This project was born out of a passion to change the lives of others through architecture. I started this project by researching the difference between American and Scandinavian prisons. Scandinavian prisons tend to be more humane and use evidence based design to accomplish their goals. I used the information I found to guide the direction of my project. Through this design I intended to open people's eyes to the possibility of change and rehabilitation within corrections.

My project is located in Bismarck, North Dakota on the current site of Missouri River Correctional Center. I am proposing a complete demolition and redesign of the buildings on campus. At the center of this new facility is the idea that everyone will leave with the tools they need to live a successful life after incarceration. Each building emphasizes the importance of nature, community, and education.

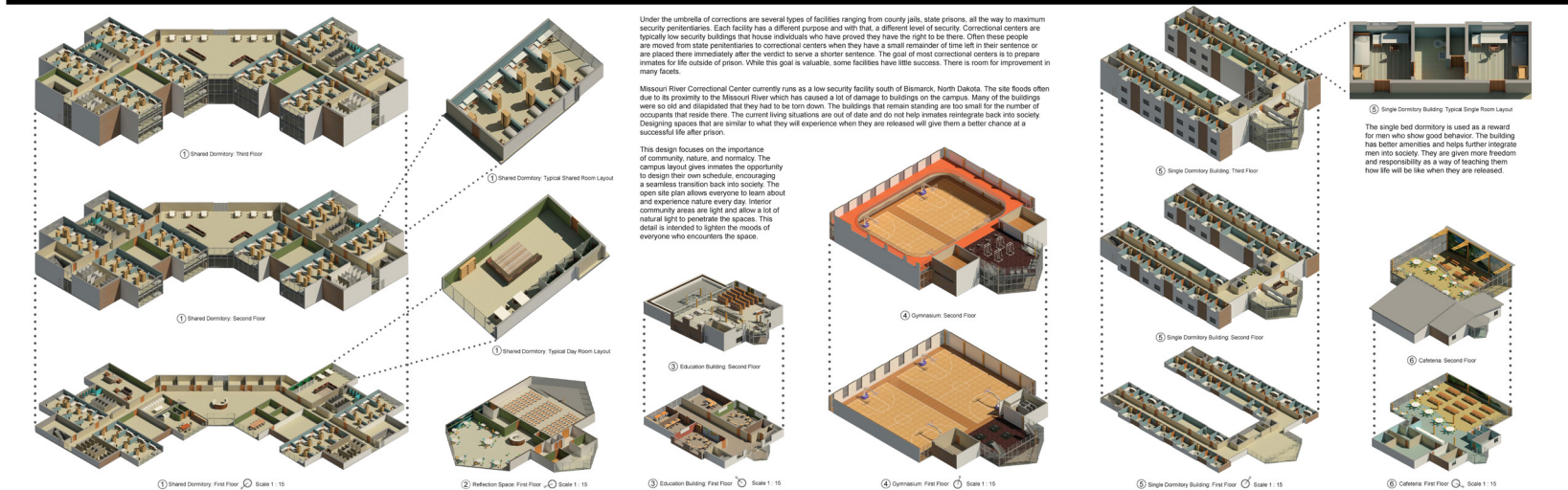
This example of evidence based design is a unique way of looking at what the future of corrections in America could be. I believe we have the opportunity to change countless lives through architecture. By encouraging inmates to live in a way similar to what they will experience after incarceration we will see changes in the rate of recidivism.



Court Yard



Family Meeting Room



Under the umbrella of corrections are several types of facilities ranging from county jails, state prisons, all the way to maximum security penitentiaries. Each facility has a different purpose and with that, a different level of security. Correctional centers are typically low security buildings that house individuals who have proved they have the right to be there. Often these people are moved from state penitentiaries to correctional centers when they have a small remainder of time left in their sentence or are placed there immediately after the verdict to serve a shorter sentence. The goal of most correctional centers is to prepare inmates for life outside of prison. While this goal is valuable, some facilities have little success. There is room for improvement in many facets.

Missouri River Correctional Center currently runs as a low security facility south of Bismarck, North Dakota. The site floods often due to its proximity to the Missouri River which has caused a lot of damage to buildings on the campus. Many of the buildings were so old and disrepair that they had to be torn down. The buildings that remain standing are too small for the number of occupants that reside there. The current living situations are out of date and do not help inmates reintegrate back into society. Designing spaces that are similar to what they will experience when they are released will give them a better chance at a successful life after prison.

This design focuses on the importance of community, nature, and normalcy. The campus layout gives inmates the opportunity to design their own schedule, encouraging a seamless transition back into society. The open site plan allows everyone to learn about and experience nature every day. Interior community areas are light and allow a lot of natural light to penetrate the spaces. This detail is intended to lighten the moods of everyone who encounters the space.

The single bed dormitory is used as a reward for men who show good behavior. The building has better amenities and helps further integrate men into society. They are given more freedom and responsibility as a way of teaching them how life will be like when they are released.

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# Design Experience



image 121

2nd Year Fall  
Darrel Booker

Projects completed:  
Tea House  
Boat House



image 122

2nd Year Spring  
Joan Vorderbruggen

Projects completed:  
Small Dwelling  
Bird House  
Montessori School



image 123

3rd Year Fall  
Steve C. Martens

Projects completed:  
Dinosaur Museum  
Fire Station



image 124

3rd Year Spring  
Regin Schwaen

Projects completed:  
"The idea of Basic"  
Steel Competition



image 125

4th Year Fall  
Bakr M. Aly Ahmed

Projects completed:  
High Rise



image 126

4th Year Spring  
Paul Gleye

Projects completed:  
Urban Redesign  
Study Abroad



image 127

5th Year Fall and Spring  
Ganapathy Mahalingam

Projects completed:  
Penitentiary Research  
Designing for Humanity



image 128

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